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# **Collaboration in Online Courses in Slovakia**

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF EDUCATION (EdD)

by

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## Abstract

Comprehensive analyses of online and collaborative learning methods in the post-communist countries of Central and Eastern Europe are nearly non-existent. Yet, these nations typically have authoritarian teaching and learning traditions which present unique and significant challenges to the development of these methods, and which are poorly understood at present. This thesis provides a thorough examination of how collaborative activities are used in online courses, and of student and teacher perceptions of these methods, in the Slovak Republic (Slovakia), and postulates that its findings are relevant and valuable for the many newly open societies in the region that are now entering the online teaching world.

Research involved case studies of two Slovak higher education institutions, and interviews with administrators and teachers from a number of Slovak educational institutions.

Findings can be summarized as follows:

- Collaboration is rarely used as a teaching method in Slovakia, particularly in online settings
- Students do not expect to be asked to participate in discussions, but when asked they seem to have no problem embracing the method.
- Instructors at many Slovak institutions lack the motivation and training to promote and use collaborative methods in their online courses
- The few instructors who make the effort to implement some of these methods use mostly asynchronous discussions.

Further analysis of data and findings leads to suggestions for improving the use of collaborative methods in online learning on three key levels: the course level, the institutional level, and the national policy level.

The gradual implementation of more student oriented and collaborative teaching approaches can and will happen in Slovakia, just as it has in other western societies. It will happen in face-to-face teaching as well as in the online form, and its success in the latter will be a function of focusing on incentives, training and support.

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## Introduction

The amount of online information accessible today is large and growing fast. The concerns facing education is how to make sense of all of the available information, how to choose reliable resources and how to apply them. According to Garrison and Anderson (2003), in a knowledge-based society it is not so important to learn, as it is to learn how to learn. Some authors argue that the amount of information accessible now is so large and growing so fast, that it is practically impossible to absorb it all. Siemens (2004), points out that knowledge does not reside just with the individual, but is distributed across networks and groups of people, so knowledge is not only personal but is often shared.

However, students need to be able to think for themselves, to critically analyze and evaluate information, as well as to be able to work in teams with their colleagues and share knowledge and information well (Brooks and Brooks, 1993; Brown et al., 1989, Siemens, 2004). What an online environment provides is an ideal platform to implement educational interactivity and collaborative activities. However, there are countries where interaction and cooperation have not been a part of the face-to-face educational tradition, such as Slovakia, where an authoritarian teaching style (one in which teachers are assumed to know all the answers and expected only to transfer knowledge to students), has prevailed for many years. In such countries, even well-trained instructors often fail to establish an effective online working environment for their students - they do not consider implementing collaborative activities into their online courses.

In Slovakia, undergraduate and master-level university courses very often consist of conventional lectures and exams. In December 2007, a Slovak journalist interviewed four Slovak students and two professors studying and teaching at universities in Western Europe and the United States. They all asserted that the main difference between Slovak higher education and their

international experience was the use of project work, collaboration, and encouragement of creative and independent thinking (Horakova, 2008), which is indicative of the authoritarian style.

When introducing online learning in Slovakia, the focus often narrows on the technology, rather than the pedagogy. For example, strategies for applying sound and visual media in the virtual classroom are used widely, but interaction within the course is often kept just between instructor and student. In this way, an authoritarian teaching style is maintained across educational platforms as it is transferred from the face-to-face to the online environment. This phenomenon is by nature closely connected with both the broader social and economic context of Slovakia, as well as with the personal values and pedagogical principles of individual teachers. Certainly, changing the instructional style of teachers and the approach to learning of students in this country is neither fast nor easy.

Introducing collaborative activities into online courses does not occur on a great scale in Slovakia, yet it is not entirely absent. It is worth a deeper look into the courses that do use them to determine what approaches are working best for students and teachers in the broader social context.

### **Research area and questions**

The research focused on two key areas and asked the following questions:

#### **1 Perceptions of collaboration among Slovak students:**

- How do students in the Slovak cultural context perceive and either embrace or reject online collaboration?
- What problems do students experience in an online interactive, collaborative setting, and what remedies to those problems are currently employed?

#### **2 Methods and strategies used by Slovak course instructors:**

- What methods are used to encourage and facilitate online collaboration and community building?
- What strategies are used by instructors to apply these methods?

Analysis of the results of the research should bring answers to following question:

- Which needs of both instructors and students are presently lacking support and what solutions may exist?

## **Chapter 1 – Literature Review**

The goal of the literature review is to provide background, reasoning, arguments and information on the methodology for my research. The first section looks into the background and reasons why it is considered valuable to use collaboration as a tool in online learning, and why I consider it worthy of ongoing research.

The second section looks more closely into methods teachers could use to encourage online collaboration and the ways in which students perceive it. It is followed by section three that reviews literature on possible models for organization of online learning within an educational institution.

The fourth section establishes a background framework for the research. This entails looking into how authoritarian traditions affect teaching and learning in higher education in Slovakia, past and present, and how this influences the development of online learning now, and in the future. I follow up with a deeper look into existing support structures for online learning, and explore how collaboration is being used at present.

### **1.1 Why Online Collaboration**

The aim of this section is to look into the background and the reasons why it is considered valuable to use collaboration as a tool in online learning, and why I consider it worthy of ongoing research.

First I examine contemporary attitudes toward theories of teaching and learning then explain the principles of constructivism, and the reasons for my support for them. I then focus on the recent rise in popularity of constructivism and the positive perceptions now linked to it and finally I

explore the implications of applying a constructivist collaborative approach to the online setting.

I make use of a simplified view in linking the understanding of knowledge to learning theories, and in compartmentalizing learning into behaviourism, cognitivism and constructivism, with the addition of connectivism. These terms and theories have a much wider meaning and background in psychology and human sciences, however, my goal for this section is limited to pointing out the importance of collaboration in online learning, not to provide an examination of learning theories. Also, this simplified view is widely used in literature in North America (Bates et al, 2000; Driscoll, 2000; Wong, 2003; Siemens, 2004).

### **Teaching, Learning and Knowledge**

Teachers use a variety of approaches and strategies in their pedagogy. These are mostly based on their predispositions, beliefs and intentions (Norton et al., 2005). Their beliefs correspond to a notion on how students learn, and of course, enabling students to learn is the primary role of a teacher (Ursano et al., 2007). However, there are many different opinions on how students learn, hence, there are many different approaches to teaching. If we define learning as acquiring knowledge (Bates et al., 2000), then we need to define what knowledge is, in order to know how to teach it.

In comparing definitions of knowledge, we find two main approaches: objectivist and subjectivist. The objectivist approach defines knowledge as something existing objectively independent of the learner and the learner's goal is to access it (Wong, 2003). The subjectivist approach argues that there is no independent body of knowledge that we should try to gain unobstructed by the biases of our prior experience and interpretations. According to this view, knowledge is a constructed reality closely linked with the knower, knowledge and the knower cannot be separated and there are different meanings constructed by different learners all of which are

equally valid (Bates et al., 2000). There are, then, different theories about how students learn based on different definitions of knowledge.

## **Learning Theories**

This section briefly describes key features of major learning theories – behaviourism, cognitivism, constructivism and connectivism, in relation to how students learn.

Behaviourism is a learning theory based on an objectivist understanding of knowledge (Bates et al, 2000). According to the behaviourist theory, learning is defined as an observable change in behaviour (Skinner, 1990). Although behaviourism is also rooted in psychology, the behaviourist teacher is not interested in a student's way of thinking or his/her internal processes of learning, only behavioural changes that can be directly measured are relevant.

Bates, et al. (2000), summarizes the key assumptions of behaviourism as follows (Bates, et al., 2000, p.7):

- Only observable and measurable phenomena are relevant for the study of learning. There are only two kinds of phenomena that fit these criteria: stimuli within the environment and responses performed by the organism.
- Processes such as thoughts, motives and emotions cannot be measured and hence are considered irrelevant for the study of learning. A human, for the purpose of studying learning, is considered a “black box” – only external stimuli and the resulting outward responses can be studied.
- The study of learning is possible only when we can observe a change in behaviour.



Cognitive learning theory is based on the subjectivist definition of knowledge. Cognitive theory emphasizes the importance of how individuals perceive, interpret, store and recall information. Knowledge is considered to be a mental construction in the mind of the learner. Learning is the process of remembering these symbolic representations (Wong, 2003), where the internal processes of the learner are important, not the environment (Bredo, 1997).

One of the most significant implications of cognitive learning theory is that the teacher needs to be interested not just in what students learn, but also how they perceive and process information. In order for learning to be effective, students also need to gain skills and methods for information retention, storage and retrieval (Wong, 2003). A common feature of both behaviourist and cognitive learning theories is that learners are perceived as distinct units and fellow students relevant for comparison sake only (Bates, 2000). This is not true for constructivism.

Constructivism presents both a perspective on knowledge and a unique learning theory. In the constructivist perspective, while there is a real world that we experience, meaning and knowledge are constructed by individuals based on their interpretations of reality. This appears similar to the definition of the subjectivist approach, except that constructivists do not reject the notion of an independently existing reality as some subjectivists do. The critical key to learning is experience. We learn from experiencing phenomena (objects, events, activities, processes) and interpreting those experiences based on what we already know, reasoning about them and reflecting on the experiences and the reasoning (Bruner, 1990). Clinchy (1995) claims, that learning occurs if a new experience does not fit previous understanding and the current cognitive schema needs to be adjusted.

Hence constructivist educators are supposed to try to create environments where learners

*“are required to examine thinking and learning processes; collect, record and analyze data; formulate and test hypotheses; reflect on previous understandings; and construct their own meaning;” (Crotty, 1994, p. 31).*

This means that a student needs to take on an active role in the education process. Constructivists thus promote a student-centred pedagogy and constructivist learning theory is the first pedagogy that acknowledges the role of co-learners in the learning process (Wong, 2003). Knowledge and understanding are constructed by learners and teachers working together, each contributing their own interpretations and drawing on their own unique personal experience (Bates et al., 2000).

At the end of the 20<sup>th</sup> century and in the early 21<sup>st</sup> century, constructivist theory became very popular and was widely researched and analysed. Different points of view emerged within its framework along with terms like cognitive constructivism, radical constructivism, social constructivism, cultural constructivism or critical constructivism (Dougiamas, 1998). For practical purposes only two tracks within constructivism are generally used and recognized (Cobb, 1994; Bonk and Cunningham, 1998). One is cognitive, focusing on individual constructions of knowledge discovered in interaction with the environment. The other is socio-cultural, viewing learning as a

*“...connection with and appropriation from the socio-cultural context within which we are all immersed” (Bonk and Cunningham, 1998, p.32).*

Connectivism is a new addition to modern learning theories, presented by George Siemens in 2004. It extends concepts of constructivism to a technology influenced knowledge society. Siemens argues that technology is changing society and learning, and the amount of information accessible now is so large and growing so fast, that it is practically impossible to absorb it all. The knowledge does not reside just with the individual, but is

distributed across networks and groups of people. This externalization of knowledge is a way to deal with information overload. According to Siemens, our capacity for learning is in the connections we form with people and information.

### **Importance of Collaboration in a Knowledge Society**

The theory of connectivism takes into account the issue of information overload and necessity of connections to other people in order to function in a knowledge society. This makes the ability to connect to other people and to work with them an absolutely critical skill, which a number of constructivist authors have been emphasizing for quite some time (Brown et al., 1989; Brooks and Brooks, 1993; Garvin, 1994).

Whether constructivist teachers use collaboration as a catalyst for individual cognitive processes (cognitive approach), or as a vital part of the learning process (socio-cultural or connectivist approach), it is an essential tool closely connected with modern learning theories and concepts of a knowledge society.

### **Collaboration Applied to the Online Environment**

The shift from face-to-face classrooms to the online environment has brought a number of changes to education. Online learning enables access to education for students that could not attend face-to-face classes, due to the distance or time constraints (Conrad and Donaldson, 2004). It also gives learners choices on the place, time and duration to devote for study, and it demands the learner to have responsibility and self-discipline to put in the requisite effort for effective learning.

Online course designers and teachers come with their own teaching beliefs and approaches, which influence the use and methods in their teaching

strategies when applying a collaborative approach. The online environment offers some extended opportunities - it provides learners with new means for interaction such as asynchronous discussions, chats, wikis or blogs (Bruffee, 1999; Palloff and Pratt, 2005).

Many experts go one step further in promoting the collaborative approach in online learning - even defining online learning through collaboration. For instance, Frydenberg (2002) claims that online learning cannot be defined by distance between students and a teacher, or by using only computers and the Internet. The main features and changes that online learning has brought into education are in interaction, sharing, cooperation and new control of the students over their learning process. Palloff and Pratt (2005) call collaboration the cornerstone of online learning.

These statements though, are not entirely accurate since collaboration and interaction exist in face-to-face classrooms and in our daily lives even without the use of technology. But they illustrate very well the extent of the popular association between online learning and collaboration.

### **Limitations of Online Collaboration**

Like other teaching and learning tools, online collaboration is not perfect and has its limitations. For instance, Gulati (2004) challenges formal strategies of online participation for their narrow interpretation of the constructivist worldview and points out that online collaboration thrives better as an informal learning environment. Spencer-Scarr (2010) also emphasize the dynamics and informality of online collaboration; they conclude that most recent research into online collaboration is focused on mechanics, tips and tricks or rules and guidelines of how to transform collaboration into the online platform, but very little attention is paid to addressing core concepts of the virtual world. According to them, different concepts of time, space and 'virtuality' present challenges that haven't been sufficiently researched.

Section 1.2 focuses on some of the challenges of online collaboration and rules and guidelines provided in literature.

### **My Personal Disposition**

I grew up and studied for my first master's degree in a totalitarian communist country, where authoritarian teaching practices were a politically supported norm. Teachers viewed memorization as the best way to teach and very few teachers tried to encourage their students to think for themselves.

When I took my first online course through the University of British Columbia in 2000, I encountered the constructivist approach and used collaboration in learning for the first time. It was like a revelation. Since then I have believed in the collaborative socio-cultural constructivist approach – in encouraging the student to seek, to figure out, to ask, to discuss, to discover and to apply instead of being served prepared knowledge and theory. I am also growing more enthusiastic towards the principles of connectivism.

### **Summary of Section 1.1**

Teachers need to have informed beliefs on how students learn in order to teach them more effectively. There are many different opinions on how students learn; hence there are many different approaches to teaching, based on different learning theories.

Constructivism is a learning theory and teaching approach that encourages students to construct their knowledge based on experience. This means that a student takes on an active role in the process of her/his own education, as well as that of others learning alongside him/her. Connectivism emphasizes the need to externalize the large amounts of knowledge available and the ability to connect with others in order to access it. Constructivism and connectivism are also considered by many the most appropriate teaching

approach to prepare learners for life in a knowledge society (for instance Siemens, 2004; Palloff and Pratt, 2005).

Among constructivist teachers there are many different understandings of learning mechanisms, and the teaching practices based on them are equally diverse. Most of these approaches though, use collaboration as a key method to help students to learn, and shifting the collaborative approach into an online environment provides learners with new means of interaction. Many experts link the quality of online learning with the use of collaborative activities (for instance, Fridenberg, 2002).

## **1.2 Collaboration and Asynchronous Discussions**

This section looks further into the practical aspects of online collaboration, particularly with the use of asynchronous discussions and strategies to engage students in learning through discussion. In order to get students to collaborate it is not enough merely to provide them with the technology and skills to use it, but observation and research indicate that prompting a student to actively collaborate online requires a conscious effort in planning and instruction (Veerman et al, 2000; Bates, 2005b).

Garrison, Anderson and Archer (2000), provided a theoretical framework for functional online collaboration. They call a functionally collaborating group in education a Community of Inquiry, and present its key functional elements as cognitive presence, social presence and teaching presence. Cognitive presence is the basic element of knowledge construction. It means the extent to which participants are able to construct meaning in communication. The second core element, social presence, is defined as the ability of participants to project their personal characteristics into the community, hence presenting themselves to other participants as “real people”. The third element, teaching presence, provides two functions: course design and course facilitation. The course facilitation function does

not necessarily need to be performed solely by the instructor, but might be shared with students – for example where students take on the facilitation role (Collison et al, 2000).

Other research seems to confirm that the most problematic part of online coursework is establishing social presence. Face-to-face settings provide visual cues that make social contact easy and natural. In an online text-based environment lack of visual cues makes establishing social contact more challenging, but still possible (Garrison et al., 2000; Danchak et al., 2000; Swan, 2002;).

### **How to Achieve Online Collaboration Using Text-based Discussions?**

Asynchronous discussions are not the only means of communication for communities of online students. However, it is a tool that has been used extensively for years and has been extensively researched, and it is also the most frequently used form in Slovak online courses. Hence, this analysis focuses on asynchronous threaded discussions.

Text-based discussions allow students to participate at their chosen time and from their chosen place. Participation in such discussions provides students with time to reflect, articulate precisely and think through what they are trying to “say” (Muilenburg and Berge, 2002; Swan, 2002; Bates, 2005b). Research confirms that students perceive text-based discussions to be more equitable and democratic than face-to-face discussions since this format gives each student a voice and the platform to express opinions (Harasim, 1990; Swan, 2002). On the other hand, participating in text-based discussions requires more time and effort than face-to-face discussion (Bates, 2005b).

Here I present the structure of the advice provided by Palloff and Pratt (2005), with added input from other literature, which I have been using for my own teaching:

- Setting the stage – presenting an agenda and objectives, connection to the rest of the course, and ensuring that students are comfortable with technology. If students know what they are supposed to do and why, they are more likely to do it (Laurillard, 2002; Benfield, 2002). Case study research by Ge et al. (2000), confirms the importance of preparation for collaborative activity – that it significantly increases cognitive achievement of participants (Clark, 2001)
- Creating the environment. Students must know where to meet and which tools to use for collaborative work. Discussion forums need to be created, students need to know whether they may use phone calls or face-to-face meetings, and whether the instructor will be involved and how (Benfield, 2002)
- Modelling the process. Brookfield (1995, p.5) notes “*students will be highly sceptical of group discussion if the teacher has not earned the right to ask students to work this way by first modelling her own commitment to the process*”.
- Guiding the process. It is not easy to strike balance between too little involvement (that students might take as a lack of interest or disapproval), and too much involvement (where the instructor takes over discussion and students feel stifled or intimidated to express themselves freely (Brookfield 1995).
- Evaluation of the process. Every collaborative activity should have its own evaluation done soon upon completion.

A number of these authors (Edelstein and Edwards, 2002; Benfield, 2002; Palloff and Pratt, 2005), also stress the importance of setting deadlines for participation as well as guidelines for the frequency and quality of posts in asynchronous discussions, and of making discussion participation a part of course assessment. The number of students who only conduct the minimum work necessary in order to be assessed, in whatever course they may be



taking, is very high (Benfield, 2002). This applies to face-to-face as well as online courses.

Besides getting students to participate in discussions, the next concern (and a very important concern in my opinion), is how to achieve critical thinking in discussions - to get them to critically analyze options, to reflect, compare and integrate possibilities, and to search for solutions (Lambert, 2003).

Collison, et al. (2000), suggest two kinds of strategies a moderator can use in order to move discussion to the level of critical thinking:

- Strategies that sharpen focus of dialogue (identifying direction, sorting ideas for relevance, focusing on key points)
- Strategies that help participants to dig deeper into the dialogue (full spectrum questioning, making connections, honouring multiple perspectives)

Brookfield and Preskill (1999, p.152) offer categories of questions for asynchronous discussions that encourage students to think and interact with one another:

- Questions that ask for more evidence (How do you know that?)
- Questions that ask for clarification (What do you mean by that?)
- Open-ended questions
- Linking or extension questions (How does it relate?)
- Hypothetical questions (If you have... then what...?)
- Cause-and-effect questions (What is to be the effect of...)
- Summary and synthesis questions (What is the best of... what is the result?)

One of the most common mistakes instructors make is to take over a discussion by providing answers and explanations instead of prompting students to think of resolutions themselves (Collison, et al., 2000). This can

become a frequent issue especially in environments with strong authoritarian teaching traditions like Slovakia.

## **Summary of Section 1.2**

Collaboration in discussion occurs when students engage in critical thinking: when they are willing to disagree with each other, discuss different opinions and look for resolutions, and when they get engaged in discussion and start to guide and moderate it themselves.

## **1.3 Organizational Models for Online Learning**

As described in section 1.1 there is a debate about whether online learning brings about a paradigm shift towards more collaborative and student centered teaching and learning, or whether technology just enables a wider use of already existing teaching methodologies. In order to provide online learning effectively, an educational institution needs to make some organizational adjustments (Bates, 2004). This section reviews necessary changes, services and organizational models and concludes that choosing an appropriate organizational model depends mainly on size, complexity and originality of the project, and the resources available. It also points out the importance of teacher preparation and student support.

### **Institutional Approaches to Online Learning**

In most Western countries, university teachers have a high level of autonomy with regard to teaching (Bates, 2000). This also applies to Slovakia. As a result, the most common way in which an introduction to using technology in teaching enters the institution is by the local initiatives of teachers. At some institutions this is encouraged through providing small

grant funding for teachers wanting to implement innovations into their teaching. Bates (2000, p.59), calls this the “*Lone Ranger Approach*”, referring to the fact that these courses are the results of individual teacher’s initiatives who do all the planning, design, content preparation and teaching, themselves. This typically bottom-up approach provides space for experimenting, space for teachers and students to gain the necessary skills, and supports a wide range of different initiatives. On the other hand, these small individual projects can very often fail because of an amateur approach to the technical aspects of the project by its creators, a lack of plans for project sustainability, and a lack of time for professors to bring their small projects to completion. Furthermore the Lone Ranger approach can lead to a duplication of effort when technical or instructional problems are common in more than one case.

There are some improvements to the Lone Ranger approach, funded by small grants that could help to eliminate its main risks (Bates, 2000):

- Before funding, the grant applicant should specify how the material will be used once the project is completed
- Matching funds from department or faculty should be required to ensure their commitment to the project
- The grant holder should attend a short training course on multimedia or Web design as a condition of the grant, in order to understand the limits of the technology and to make more targeted and realistic technical plans
- Continuous sessions during project implementation should be held, where teachers present their projects in different stages of development and discuss them
- Workshops on using technology in education should be offered and alumni of these courses could get a funding priority
- Formal evaluation of projects should be required
- A central support unit with technology specialists and instructional designers could be created to provide help to grant holders

- The grant should be paid in installments, the last part available only after a demonstration of a functional project

As we will see in section 1.4, the Lone Ranger approach is the most frequently used in Slovak institutions.

Hartman and Truman-Davis (2001), describe what they call a *Boutique* approach to online course development. According to them, a *Boutique* approach includes a support unit where a teacher who wants to develop an online course can come to get one-on-one support from an instructional designer and/or technology support person. Harman and Truman-Davis explain that this individual pairing of an instructional support person and teacher can be very satisfactory for both of them, but the model works well only while the number of teachers needing help is not too large. Too many requests could become overwhelming for the support person if there are no rules for prioritization between projects. Sometimes teachers can be asking for the wrong kind of assistance (for instance requesting technical assistance when course design changes might be needed).

Another emerging model is *Collegial Materials Development* (Bates, 2004). In this model several teachers work collaboratively to develop online materials. The teachers might be from the same institution or subject experts from different institutions. They can share ideas, develop materials together and provide feedback to each other. In this model, each participant decides which materials to use and which materials to share. Often, the material created is made public as an open educational resource (for instance, through The Open University's Open Learning Network).

The *Project Management* approach (Bates, 2000; 2004), involves a team working on design and delivery of the project. Each team member contributes different skills while a team leader or a project manager manages the process. The project can be an online course, a whole study program, a small module of a course, or a CD-ROM or website. The project is defined by the process used to manage it. There are clear objectives, a set

of resources, time-line and a budget. The project manager does not necessarily need to be an experienced teacher or instructor; it may be better to have a person trained in project management.

Choice of a proper organizational model for an institution depends on a number of factors (Bates, 2004). The most critical are the size, complexity and originality of a project, and the resources available. A simple project like a teacher adding a power point presentation to his/her classroom teaching does not need project management. However, if an entire course or program is being converted into online form and completely re-designed, project management might become essential.

### **Human Support for Online Learning**

Even more important than the physical infrastructure, are the people who make the infrastructure work. Bates (2000; 2008), argues that there are four levels of support required for online learning at an educational institution to work effectively:

- *Technology infrastructure support staff*... the most obvious level of support is the support necessary to make sure the networks and equipment are properly installed, operated, updated and maintained.
- *Educational media support staff*... the technical support for creation and application of educational materials. This includes interface design, graphic design, web programming, etc.
- *Instructional design support staff*... support in educational services and expertise such as curriculum design, instructional design, faculty development, project management and program evaluation.
- *Subject experts*... these are professors, instructors, teachers or subject matter experts who create the content and provide teaching.

According to Bates (2004), one of the big mistakes many institutions make is underestimating the importance of non-technical support, resulting in high costs and lack of efficiency of online learning. As we will see in later chapters, this is the case of most institutions in Slovakia.

### **Support for Teachers and Students**

Many experts agree that teacher support needs to be more complex than just simple computer literacy training (for instance Palloff and Pratt, 2005; Bates, 2007; Wilson, 2007). There needs to be a system of training for all the necessary skills for implementing new technologies, along with a system of financial incentive and support. According to Merisotis and Phipps (2000), among the essential quality benchmarks in teacher support for online learning development are:

- Technical assistance in course development available to faculty who are encouraged to use it
- Faculty member assistance in the transition from classroom teaching to online instruction, and assessment during the process
- Instructor training and assistance, including peer mentoring, continuing through the procession of the online course

Support for online students might be one of the most important aspects of online learning. Experience shows that without proper support, dropout rates of online students are high and programs are not successful (for instance Bates and Poole, 2003; Palloff and Pratt, 2005). Online student support covers a wide range of issues, but the most important according to Bates( 2005b) are

- Marketing/course information
- Registration and tuition fee payment
- Course administration/passwords/technical help

- Ordering and delivery of materials
- Online moderating
- Student counseling
- Student assessment and feedback

### **Summary for Section 1.3**

In order to deliver online learning effectively, an educational institution will most likely need to make some organisational adjustments. There are several models of organizing online learning within an institution. The most common start-up is the Lone Ranger model, which can be followed by a Boutique Approach, Collegial Materials Development or a Project Management Approach. There are also four levels of support that an institution may need to provide to its teachers and students in order for online learning to work effectively: technology infrastructure support, educational media support, instructional design support, and subject experts.

## **1.4 Slovakia**

In this section I establish the background and framework for my research. This entails looking into how authoritarian traditions affect teaching and learning in higher education in Slovakia, past and present, and how this influences the development of online learning now, and in the future. I follow up with a deeper look into existing support structures for online learning, and explore how collaboration is being used at present. In this last part, I also use some information gained from interviewing administrators and teachers from different institutions.

### **Authoritarian Traditions in Education**

Slovakia, similar to other post-communist countries, is struggling today with a significantly higher use of authoritarian teaching methods than countries in Western Europe or North America. However, the authoritarian approach to teaching and learning is not unique to Slovakia, nor is it limited to the former communist nations. Traditions of authoritarian teaching exist all over the world (Bates, 2007). By an authoritarian method, I refer to a teaching approach that is unilateral in nature, in which students are passive receivers of information from a teacher who holds all the relevant knowledge on the topic of study. An authoritarian approach does not encourage independent thought or self-guidance on the part of students; it makes only limited use of discussion in the classroom and does not employ group or collaborative activities.

Baker (1994) describes the basic difference between authoritarian and critical thinking approaches as a moral and spiritual dilemma. He ascribes the “spiritual” approach - one that encourages independent and critical thinking in students, to Socrates, and the “moralist” approach - according to which independent thinking in a student is not desirable, to early Victorian Thomas Arnold. For Arnold, there was no need to search for knowledge since everything was already known. Faith, authority and order were the utmost priority at schools in the early nineteenth century.

Baker (ibid) cites British schools as adherents to Arnold’s principles, through the 1960s, when movements for more freedom in thinking and values initiated changes in education. There are claims that there was similar pressure on curricula changes due to the changes in society in the 1970s and 80s in Western Germany and other West European countries (Weiler 1990) as well as in the United States (Rogoff et al., 2003). It resulted in the recent mixed-use of teacher-centred and student-centred teaching styles with many teachers incorporating an increasing amount of student-centred practices into their teaching routine (Cuban, 2006).



The cultures of East-Central Europe (a region comprised today of Hungary, Poland, and the Czech and Slovak Republics), have historically been associated with Western European civilization. This came to be about a thousand years ago when the kingdoms in the region accepted Roman Catholic (western) as opposed to Byzantine (eastern) Christianity (Szebenyi, 1992). For an entire millennium since that time these countries were part of a common cultural sphere with the West, and for the last few centuries in particular, under the Hapsburg and Austro-Hungarian empires, were considered an integral part of Western Europe. However, when communist regimes took over following World War II, the traditional authoritarian teaching style became not only common practice, but also a rigid paradigm that together with the active suppression of independent thought, relegated the region's pedagogy to a political tool for sedating society. In the words of Hannah Arendt (1968, p. 168):

*“The aim of totalitarian education has never been to instil conviction, but to destroy capacity to form any”.*

While Western Europe and North America went through student revolts and structural changes in the 1960s and 1970s, and their education systems opened up accordingly, higher education systems in the East were not liberalized at all (Rozsnyai, 2003). In the second half of the 1960s, Czechoslovakia experienced a brief period of political liberalization known as the Prague Spring. In the mid-1960s, international scientific cooperation began to flourish (Nissonen-Trnka, 2008), borders were opened and foreign influence and ideas would eventually influence education as well. But this period of relative freedom was short lived, cut off by an invasion of armed forces of the Warsaw Pact, led by the Soviet Union in August of 1968 (Prečan, 2008). The aftermath brought intense political pressures to bear on teachers and administrators throughout the early 1970s, thereby heavily focusing on the ideological control of academia and education (Oates-Indruchova, 2008).

Hence, as a result of the historically brief communist era in Poland, Hungary, and Czechoslovakia in particular, while education was made widespread and accessible, it became centralized and curricula heavily politically indoctrinated. The authoritarian approach, which was prevalent in all schools in Europe after WWII, became fixed in place and time in these countries, and they underwent little change for over 40 years (Livschiz, 2006; Zajda, 2007).

### **Slovakia's Higher Education Before 1989**

Since the creation of Czechoslovakia in 1918, education standards have been consistently lower in the Slovak territory when compared to Czech areas - historically the most developed parts of the former Austro-Hungarian Empire. The first Slovak universities were established after 1918 with the help of Czech academics, and it is because of this help that Slovakia once had an advanced system of higher education. Prior to 1989, the educational system of then Czechoslovakia was considered "good" by both its population and regional experts (Rosa and Soltes, 1999). However, the structure of education was organized strictly according to the Marxist-Leninist ideologies that were the constitutional foundation for the whole educational system. Another important feature was that all levels of education were free of charge.

Some of the universities (mainly in the fields of technology, arts and law) offered a so-called part-time study that was free of charge for adults. However, access was limited and hence mostly filled by Communist party members privileged by the regime<sup>1</sup>. In many cases teachers were told that their "important" students could not fail the exams whether they learned something or not. Since this was commonly known, the part-time degrees

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<sup>1</sup> Very often a high position at a state factory was given to a communist party member as a reward for his party work, who unfortunately lacked any of the higher education necessary for the position. A resolution was to formally become a part time university student showing willingness to improve your education, which was enough to get the position.

were famous and often joked about for the low level of knowledge of their graduates<sup>2</sup>.

### **Higher Education Reforms and Changes in Slovakia after 1989**

The transformation of the political and economic systems in the region after 1989 (when the communist totalitarian regimes ended) brought the potential for a great shift in the prevailing paradigms in education, research, science, and many other areas as well. As the turn of events would have it though, a decline in economic production has coincided with this transformation and resulted in decreasing investment in many areas, and particularly in education, with funding priorities focused more on the social and political transition itself (Zajda, 2007). Thus, even though the year 2009 marked twenty years since the fall of these totalitarian regimes in Europe, not very much has changed in the teaching approach and practices of Slovakia and its neighbours.

The first democratic Higher Education Act in Slovakia was passed in 1990. Since then it has been updated numerous times, slowly bringing on positive as well as some negative changes. Some positive and negative changes in higher education in Slovakia after 1989 (summary is based on Rosa and Soltes, 1999, updated) are as follows:

- The possibility of studying at secondary schools and universities has gradually increased. Between 1992 and 2002, the number of students in Slovak higher education rose from 64,311 to 136,922 (Laszlo, 2008). Access to study is possible only via entrance exams. In some specializations where the interest for study is high (mainly in social sciences and humanities), the chances for being accepted are still about 1:10 or even lower;

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<sup>2</sup> One joke for illustration: What is the difference between a nightingale and a sparrow? Not much, both studied singing, but the sparrow was a part-timer.

- The state monopoly in education has come to an end, paving the way for the establishment of religious and private schools. Universities were able to become private as of 1996, and by 2005 ten were opened. But in reality, less than 5% of all current university students study at private universities (Schlosser and Plavcan, 2009);
- The educational programs and syllabi are less uniform and teachers have more freedom in choosing approaches and methods. But they also have very little motivation to do so;
- The general conditions for school and university teachers have changed. The evaluation of teachers is no longer linked to their "political orientation or engagement". However, for a long time average wages in the education system have been below the national average and this is a primary reason why many competent and skilful academics are leaving the sector. This "internal" human capital lost is negatively influencing the quality of the entire educational system;
- Universities regained academic freedom, wide autonomy and democratic methods of management. On the other hand, the development of university managers to be able to handle all the challenges of educational management is rather slow (Devinsky, 2000)
- A new financial structure was introduced in 2002 and later updated in 2007, 2009 and 2011. Public universities now receive most of their state funding according to their number of students (SME, 2011). Practically everything about a student's university education is still funded by the state.

Up until 2007, study at state universities had to be free of charge for all citizens of Slovakia. Since the interest in study is much higher than the admission space, many universities have found unofficial ways to charge fees for part time study, mostly in partnership with private companies. A university would take students on for free, while students pay course fees to

the company. The company then pays the teachers directly or makes a donation to the university, or both. In an effort to make the existing situation lawful, the Ministry of Education finally introduced tuition fees in 2007 – but only for external part-time students. Students in full-time programs still do not pay any tuition costs.

The Ministry set a cap, however, on the number of external paying students each university can accept into a program, and more significantly, set tuition fees for each field of study based on the real cost of training in that field, while ignoring the demand in the job market for graduates in these fields. Hence, schools ended up charging high fees for training of medical research assistants, for example - a field where both the interest level of students and salaries of graduates are low, and charging the lowest fees for business and law studies – two fields where both the student interest level and entry-level salaries of graduates, are high (Nejedly, 2007; Liptakova, 2008). Of course, this was financially unsustainable, as schools ended up with fewer students, and most of whom were paying at the lower end of the fee scale. This did not help to improve their budgets or to invest in the quality of education. And naturally, part-time students paying tuition fees felt discriminated against. Hence tuition fees for external programs were cancelled again and the Ministry of Education is trying to re-introduce them with a different payment structure in 2011.

There were also some changes in the Slovak higher education system made in accordance with the EU Bologna process - so named for the place where it was drafted and, in 1999, signed by Ministers of Education from 29 European countries.

The process focuses on creating the European Higher Education Area by (Bologna Declaration, 1999):

- Adopting a system of easily readable and comparable degrees based on two main cycles – undergraduate and graduate
- Establishing a system of credits

- Promoting student and teacher mobility
- Promoting European cooperation in quality assurance
- Promoting necessary European dimensions in higher education

Slovak universities, as well as those in other Central and Eastern European countries, made remarkable progress in switching to two-cycle degrees and transferring to a credit point system. However, international student mobility is still very low. Kozma (2008) explains that this problem applies to all countries of Central and Eastern Europe. Besides funding problems, these higher education systems have been in transition and universities may want to “complete” their credit transfer system before dealing with many transfers.

### **Continuing Problems of Slovak Higher Education**

It is possible to summarize the remaining and most pressing problems of Slovak higher education as follows (issues are combined from lists of Rosa and Sefranek, 2002 and Beblavy and Kubanova, 2001, with recent updates and explanations):

*Financial Problems.* During the recent twelve year period, 1995 to 2007, Slovak state funding for higher education increased very little, from 0.7% GDP in 1995 to 0.9% in 2007. The 2007 figure represents the lowest funding on a percentage of GDP (along with Hungary) in the European Union (OECD, 2010). The funding dilemma was compounded by the fact that the student enrolment numbers increased dramatically during the same period. Naturally, when accompanied by a general lack of funding sources, spending is neither efficient nor effective.

Table 1.1: GDP percentage that a few selected countries spent on higher education in 1995 and 2007

Country	% of GDP spent on higher education in 1995	% of GDP spent on higher education in 2007
Austria	1.2	1.3
Czech Republic	0.9	1.2
Germany	1.1	1.1
Hungary	1	0.9
Netherlands	1.6	1.5
Norway	1.6	1.3
Poland	0.8	1.3
Slovakia	0.7	0.9
United Kingdom	1.1	1.3
EU average	N/A	1.3

Source: OECD (2010), indicator B 2.1

*Staff Problems.* Due to the lack of funding, universities face serious ‘human capital flight’ problems among Ph.D. students and young teachers. In many departments, the average age of employees is far over forty and universities can face a serious lack of quality teachers within the next two decades.

Human capital flight is a serious problem for the whole region of Central and Eastern Europe. However, very often Slovak Ph.D. students state their top reason for leaving as “conditions for research work” (Campodall’Orto, 1997; Boshier and Pisutova, 2002; Pisut, 2008), which indicates not only financial factors at play, but a failure of the system to inspire and motivate as well.

*Atmosphere.* The position of university teacher does not carry very high regard in Slovak society. Before 1989, manual workers were preferred as the “leading class of socialist society”, and until now traces of these preferences are still visible in salary structures,<sup>3</sup> as well as in a general disrespect toward educated people in the society.

*Quality assurance.* Most of the criteria for program accreditation are based on quantitative (number of professors, docents) rather than qualitative (curricula) indicators. Hence, the quality of study programs at different state universities varies significantly. Distribution of state funding between

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<sup>3</sup> The pay of a teacher is lower than the pay of a bus driver, and is substantially lower than the pay of a rank-and-file police officer, a customs officer or a fireman (Kotasek, 1999)

universities is done mainly according to the number of students and the technical needs of specialization. Complex accreditation of Universities based mostly on research quality was introduced in Slovakia from 2009. For the first time, there is a way to take away accreditation from a University not fulfilling minimum criteria (Glovicko, 2008; Horakova, 2009). First round of new accreditations were finished in the middle of 2010 and universities were given time for improvements before the Accreditation Committee suggests to the Ministry of Education to strip their University status (Glovicko, 2010; 2011). However, some experts express doubts that this will really happen. Renata Kralikova, from a local think-tank, points out that cancellation of an institution needs to be approved by Parliament, hence it will become political issue and depend on lobbying and universities can also object to their cancellation at court, which might take years to resolve (Nejedly, 2011)

*International mobility of Slovak students and teachers.* In the 2005–06 academic year, less than 1% of the overall number of students took part in scholarship programs abroad (Laszlo, 2008). The number of international students at Slovak universities is also only about 2.3 1%. The average rate of international students in EU countries is 5.9%. (OECD, 2010)

### **International Mobility and Authoritarian Approach**

According to the survey on Slovak student satisfaction with their schools, they were not very satisfied with the teaching process, but they also did not think that libraries or Internet were very important for their learning (Kocan, 2007). This might be explained by the fact that although students were aware that their learning was not very effective or results useful, they did not acknowledge that it might be their own active involvement in learning, including independent use of library and Internet resources, that might bring change (Kralikova, 2007).



On the other hand, students and teachers who spent some time at a university abroad have very clear views on these problems and necessary changes. Journalist Jarmila Horakova (2008), interviewed Slovak university students and teachers who spent time studying or teaching at a western European or North American university, asking how they perceived the differences in teaching and learning between home and abroad. Three students interviewed with experience from universities in Denmark, Germany and Belgium, all agreed that the main difference is that in Slovakia students remain with the impression or expectation that the teacher knows everything and should simply transfer their knowledge. In Western Europe, the student is a partner to the teacher and they analyze issues and search for answers together.

Tomas Nejedly, who also interviewed Slovak university students in an effort to find out reasons for the low quality of Slovak universities, got very similar answers (Nejedly, 2008). One student with international experience described how very common it is in Slovakia to have a professor who simply reads the textbook aloud during the lecture. This particular student claimed that he bought a laptop, so that he can at least do his emails during the lecture and will not fall asleep.

There are also a number of teachers (mostly with international experience), who take critical views of teaching practices at Slovak universities. Teachers with experience from German, British, Dutch and US universities interviewed by Jarmila Horakova (2008), described a complete lack of focus on developing critical thinking in students at Slovak universities. Also Matusova (1997), criticizes Slovak university teachers for doing little more than transferring knowledge, and Burjan (2008), describes how a lack of opportunity for students to make independent decisions throughout schooling, from primary through the university levels, results in adults who always expect somebody else to make decisions for them. Similar views regarding the of lack of encouragement of independent thinking and authoritarian teaching methods at Slovak universities can also be found in the works of Zabka and Mojzis (2005), Mojzis (2008), or Liptakova (2008).

## **Summary for section 1.4**

Slovakia is not very culturally distinct from Western Europe or North America. When the communist regime took over after WWII, authoritarian styles of teaching were the norm across the western world. However, the communist regime cemented these approaches in education, as well as in society at large, all the way through the end of the 1980s. Whereas in the West through the 1960s, 1970s and 1980s movements for more freedom in thinking and values initiated changes in education.

Recently, there is too little funding, or motivation among teachers and students alike, to promote such an integral change to the system. Hence, the authoritarian traditions are likely to change only very slowly. Another significant problem seems to be a very low international mobility of Slovak teachers and students. In most cases, students who complain about authoritarian approaches, and teachers trying to promote and practice changes, are people with international experience.

Following part of this chapter focuses on history, literature and research on online learning in Slovakia.

## **1.5 Online Learning in Slovakia**

The continuing problems of the lack of funding and the lack of skilled educators, and hence, a lack of quality in teaching, presents major obstacles for all kinds of innovation in teaching at the universities, and this is even more applicable to development of online learning.

Due to the fact that universities can charge only limited fees for their part-time courses, there is a lack of motivation to invest into moving these programs online to make them accessible to a larger volume of students.

University administrators (being overwhelmed by transition and lack of funding for basic needs) do not invest into building support structures for teachers or online students.

From 1995-1999, there was a European Union funded program called “Multi Country Cooperation in Distance Education”, which was trying to promote cooperation in distance education development between EU member states and accession countries (Phare Multicountry Programme in Distance Education, 1997). This project’s goal was to build completely new distance education programs in cooperation with EU partners, based mostly on the UK Open University model. In Slovakia, the interest among universities in this project was not very high. It was felt that Universities had enough problems already without changing their form of delivery. Only a few universities, all technically oriented, applied for participation in this project. Within the Multi Country Project five distance learning centres were created at four different Slovak technical universities – Slovak Technical University in Bratislava, Technical University in Zvolen, University of Zilina and Technical University Kosice.

These centres were provided with technical equipment, and employees were trained in designing, developing and teaching distance learning courses. From 1995-1999, Slovak centres participated in creating and conducting a number of distance learning courses. However, these courses were all in English and hence did not attract many Slovak students, and only three of them had any online component. In 1999, when the Multi Country Project had officially finished, a network of distance education centres remained in place, each as a part of their host university’s infrastructure. But universities did not have funding and also not much interest to move into developing their own online courses.

On the other hand, this program created the first population of university employees trained in online instructional design who later supported the first Slovak online courses and training of people at other universities, non-governmental organizations and business companies. Since then, online

courses at Slovak universities and non profit organizations have been developing based on the efforts of enthusiasts or funding opportunities either from independent donors - such as the Open Society Foundation, or EU funds e.g. the European Social Fund, ever since Slovakia became an EU member in 2004.

The problem with outside grant funding is that very often the university decides to create a particular course with a particular focus based on the grant call, rather than the mission of the institution. After the grant money runs out, the university often closes the course because they have no real interest in the focus area and hence no motivation in finding funds to continue teaching it. In this way, many courses based on EU and other grant money, simply cease to exist after the end of the grant.

In recent years, commercial companies and non-governmental institutions in Slovakia began offering some online courses. Online courses are mostly offered by technically oriented business companies and in most cases are automated lectures with self-testing, where students work individually with occasional contact with the instructor, and absolutely no contact with co-learners. A wide spread online learning commercial program is the international Cisco Networking Academies Program (CNAP), which again does not use collaboration (CNAP website, accessed on August 10, 2011).

Online learning initiatives of non-governmental institutions are even more dependent on different grants and external funding than universities, so survival of their online projects beyond the initial grant to create them is also quite rare.

### **Support Structures for Teachers in Online Learning at Slovak Universities**

A number of universities that tried to set policies and establish systems for online learning seem to focus solely on technical aspects. The University of

Zilina offers the Moodle open source environment for all their teachers. They created a department for running and maintaining servers, and provide technical support for teachers willing to try to transfer their courses. The support is also provided for students taking online courses (Bachraty and Bachrata, 2008). However, the university does not provide any incentives for teachers to transfer their courses into online form, nor does it provide instructional design support. A similar situation exists at the Slovak Technical University, which also uses Moodle as a Learning Management System (Huba, 2008), and the Technical University of Kosice, which developed a Learning Management System of their own (Kocur and Kosc, 2007).

Distance learning centres created within the Multi Country Project were mostly asked to “earn” their running costs, so designers at these centres focus on developing and creating commercially profitable courses in areas like law and management (mostly as automated self-test courses), and do not have the time or the motivation to provide instructional design help or services to their colleagues at the University.

One exception is the private College of Management, which was created by the City University of Seattle in the U.S. The College of Management offers online and blended courses, and provides teachers with training and support to the same standards as City University of Seattle. The College of Management also seems to be the only higher education institution in Slovakia that emphasizes use of collaborative activities in their coursework (Hvorecky et al., 2007).

### **University of Zilina Interview**

The University of Zilina (ZU), with about 9,000 students, belongs among the larger Slovak public universities. It is a technical university with a focus on transportation, information technology, machine engineering and management. About 10 years ago, when Slovak universities started to think

about introducing online courses to their students, ZU was among the first ones to try to apply some e-learning policy and strategy. When starting my research I was not able to identify any online courses at ZU that would be using collaboration for learning, so I have not included ZU into my research. But I met with a vice-dean of one of the ZU faculties, along with a teacher there, and recorded an interview in November, 2009, on ZU's history of planning and implementing e-learning strategy. I consider the story informative and worth using as an illustration of university management progress and failures in the Slovak environment. This interview was audio recorded with the person's consent.

### Interview Results

From 1995 to 2003, ZU had a vice-rector who was very supportive towards improving the university's information systems and introducing e-learning. He was searching for funding opportunities and succeeded in 1996 to get a large state-funded grant to implement a new learning management system. After conducting their needs assessment ZU decided to use the Moodle system. They also implemented its use for full student record administration – from entrance exams through to admission, scheduling, course exams, and grading. A few enthusiastic teachers started to use Moodle for their courses.

Later, the Continuing Education department head received a grant from an independent foundation for teacher education. All ZU teachers received a short training in Moodle. The rector then decreed that all student course registration and exam records have to be done in Moodle, so all teachers started to use it.

*“So our statistics in Moodle use look great, but we only monitor that teachers log in, not how they use the system. We do not know the number of teachers who actually use Moodle for teaching. Honestly, I do not think there are too many.”*

The IT department responsible for management of the Moodle server and technical support, administratively belongs under the vice-rector for International Relations (who was replaced in the meantime by somebody not very interested in online learning), and they do not seem to be aware that they are supposed to support teachers at their university.

*“Once, when I was presenting technical requests to the head of the IT department, he got offended: Am I supposed to be a servant for you or what?, he said. And I said: Well, actually, I think that is exactly what your job is!”*

Two weeks after the beginning of the fall semester, in September, 2009, the IT department upgraded the Moodle system. For this upgrade, the server was shut down for two days. Afterwards, teachers found out that their course materials for courses in progress had been accidentally deleted.

*“I cannot imagine a better way to discourage teachers from teaching online.”*

### Comments

From 2000 – 2003, while I was working with the Open Society Foundation on a program to help Slovak universities to establish online courses, ZU was considered a leader in the field. There were a number of enthusiastic teachers experimenting with online learning and various approaches to teaching. There were some interesting online courses developed and taught with the Open Society Foundation’s support. I met interviewees during that time and was impressed by their enthusiasm and plans. Now there are very few online courses that can be found on the ZU website.

### **Barriers for Online Learning in Slovakia from Student’s Perspective**

In this situation where technical support is provided, students do not see technical barriers as crucial. However, whatever other support they get depends entirely on enthusiasm, training (which is often poor), and the personality of their teacher, his/her beliefs and intentions.

Simuth and Sarmany Schuller (2008) conducted a survey on 274 Slovak students from four different universities focusing on possible online learning barriers. None of the students thought that lack of appropriate technology represented a barrier. Some students complained about lack of communication with peers, but all students indicated that most serious barriers are slow responses from their tutor.

As part of my masters-level research, I explored student experiences from some of the very first online courses given in Slovakia, which were taught in 2001 and 2002 (Pisutova, 2003). The purpose of the study was to investigate the problems encountered by learners during their first experience with online learning, to analyze the cause of these problems and attempt to discern which are connected with Slovak culture, history, legislation and economic circumstances, and hence, which might be specific to Slovakia, or Central and Eastern Europe on the whole. Research was conducted on four different online courses from three different universities.

Eight typical categories of problems were observed, three of which might be argued as being uniquely characteristic of the countries of Central and Eastern Europe:

- Issues of teaching approach and style. For many years socialist regimes in Slovakia did not encourage independent thought in teachers or students, resulting in a pedagogy that highlighted authoritarian teaching styles. As a result, there is a strong tendency to carry out online learning as publishing lectures on the web for students to read and to feedback.



- Problems of independence and responsibility on the part of students. The Slovak higher education system still does not encourage independent thinking of students to a great degree. Students accept being asked to memorize facts and replicate them for exams, where any other approach comes as a surprise. Teachers serving as facilitators and students taking responsibility for their own learning are new concepts in Slovak education.
- Newness of peer collaboration. The concept of collaborative learning is also new for Slovak education. There are social and psychological barriers to overcome for both teachers and students, in feeling comfortable and confident in an online and group setting, but which are necessary to get beyond for collaboration to work efficiently. There were some students who when asked about collaboration with peers assumed that they were being asked whether they cheated by copying work of others.

### **Collaboration Used in Online Learning**

The situation might be best described by the words of Katarina and Hynek Bachraty (2008, p. 197), “Technologies are new, but students and teachers are the same”.

People talk about changes and revolution in education (for instance Brestenska, 2007), but they mostly focus only on technical elements, expecting that somehow, technology itself will bring the change (for instance Ozvoldova, 2002). So very often, technologies are applied and the typical authoritarian teaching style is maintained across educational platforms as it is transferred from the face-to-face to the online environment. One good illustration is the analysis of the proceedings of one of the latest and the largest Slovak e-learning conferences that was held in Vysoke Tatry in October 2010 (Jakab, 2010) that contains 80 papers. 55 of

these papers focus on some technical, technological or software aspect of online learning. Out of fourteen papers describing a particular online course or project only two mention collaboration, group projects or peer-to-peer communication.

On the whole, there are only a very few institutions in Slovakia using any collaborative approach in an online course. These include efforts of three still existing distance learning centres created within the Multi-country project (Huba, 2008), private College of Management (Hvorecky et al., 2007), and a small number of non-governmental organizations (Pisutova and Malovicova, 2009). Mostly these institutions use asynchronous forums for communication, with occasional use of small group work or synchronous chat sessions.

### **Research on online learning in Slovakia**

Most professional articles and studies in online learning published in or about Slovakia can fit neatly into three categories – literature overview, background description, and evaluation of a single case.

Many Slovak authors focus narrowly on specific topics within the online learning field, developing theoretical articles or studies based solely on literature review (for instance Chuda and Navrat, 2010, studying plagiarism). Others produce background material as comparative works for international publications (for instance Demiray, 2010), or for international organizations such as the European Union (for instance Arneberg et al, 2007), and other institutions and agencies. Country reports in these publications, as well, are usually written by selected local experts to broadly describe the e-learning situation pertaining to the country. Other articles are written as evaluations or reviews of a particular course or program, mostly in descriptive form, and without comparing results to literature or similar cases (for instance Jancovicova and Prokop; 2008).

There are very few studies or articles in the Slovak context, which attempt to compare more than one course or program, or to form conclusions and suggestions that might be applicable on a wider scale. Beyond the two studies mentioned earlier in this chapter, in the section on student perspectives (Pisutova, 2003; Simuth and Sarmany Schuller, 2008), I was able to find only one additional study worth mentioning here.

The article published by Kocur and Kosc (2009), is actually an analysis of a particular case in which they analyze the process of implementing online learning at the Technical University in the city of Kosice. As opposed to the other articles mentioned above, Kocur and Kosc combined their case description and analysis with a thorough literature review. Their conclusions on institutional implementation of online learning are based on analyzing and comparing their case study results to a wide range of international literature.

### **Evaluation of Open Society Foundation Courses**

Worth mentioning is also a small evaluation study that I conducted with my colleague Jana Malovicova at the Open Society Foundation on a three semester blended online program conducted by two Slovak non-governmental organizations (NGO) providing training for employees of Slovak NGOs (Pisutova and Malovicova, 2009).

#### **Research Questions:**

- Is it possible to find online collaborative activities which lead to critical thinking and knowledge construction, in the Slovak context?
- What instructional techniques were used to achieve this?
- How did students perceive the activity?
- How did teachers perceive the activity?

We used Community of Inquiry Model (Garrison and Anderson, 2001) to analyze discussion transcripts, we interviewed teachers and used data from course evaluation questionnaires from students.

Analysis of results led to following general conclusions on online collaboration in Slovakia:

- Before starting design work on a course, it is important to work closely with the authors and tutors. If teachers do not understand and respect the values of collaborative methods, it is unlikely that they will apply them successfully so that students participate and gain valuable experience. In our case, due to the time and funding constraints, the training of tutors was brief and it did not include an opportunity for them to experience and appreciate online collaborative activities as a learning tool. This hampered the use of collaborative methods during the planning period and the involvement and encouragement of tutors during discussions.
- It is important to work with students' expectations. The teachers were able to make students understand that the course would not be "easier" because it is online. However, they failed to explain at the beginning of the course the purpose, importance, and learning value of discussions. It is necessary to ensure that students do not expect a discussion forum to be easy and relaxing.
- Students in Slovakia do not have a great deal of experience with collaborative activities and discussions. So if these activities are to be used in an online course, students need to be introduced to these methods. Instructors cannot expect students to participate enthusiastically and voluntarily in something that is so new and unfamiliar to them. Assignments consisting of discussions should be made obligatory in this environment, even if course participants are older adults. However, it is important to formulate instructions

carefully so that students do not find the environment to be patronizing.

This study confirms that it is possible to successfully use collaborative activities in an online course in the Slovak context, even if not without problems. Obviously, teacher and student training and support need to be adjusted. These are also areas where wider literature review will be needed.

Unfortunately, the Open Society Foundation funding for these online courses ended in 2008 and the partner NGO decided to discontinue the program. They did not secure any other outside funding and did not believe they would be able to cover all their costs from tuition. So when I started collecting data for my research later in 2009 and 2010, I was not able to make this project one of my case studies.

Experience from conducting this study just before starting to work on my dissertation research had significant influence on clarifying my research questions.

However, the dissertation research I present here, connecting and comparing two case studies, including recommendations for teachers, managers and policy makers in Slovakia, stands nearly alone in its field and should be immediately relevant.

### **Summary for section 1.5**

Most online courses in Slovakia apply teacher-centered approaches where the teacher (sometimes replaced by a computer), knows all the right answers. Interaction in these courses is only between student and tutor or student and computer. There is no student to student interaction or collaboration.

Even though there are many teachers who had some initial enthusiasm to change their teaching and to use technology, and who became disillusioned and disappointed by organizational and administrative obstacles - like at the University of Zilina, there are still few institutions or enthusiastic teachers who are trying to create and run courses using collaborative methods. I used a few of these courses at two different institutions for my research.

Only a very small volume of research in online learning has been conducted in Slovakia, and there is exceedingly little that attempts to compare more than one case study and draw recommendations for teachers, administrators or policy makers. My research accomplishes this but is only a small step toward satisfying the greater need for such in-depth study in online learning in Slovakia, and across post-communist Central Europe.

## **1.6 Conclusions**

In this chapter, I provided reasoning for the importance of collaboration and a deeper look into the higher education system, educational culture and the major problems and obstacles for online learning in Slovakia. What is clear is that in Slovakia, collaboration in online learning is not strictly linked with technology and methodology. There is a strong influence of other factors as well, including authoritarian history and traditions, economy and finances, organizational issues and international mobility.

There has been very little research in online learning conducted in Slovakia and this research comparing two case studies and providing recommendations stands nearly alone in its field.

## **Chapter 2 – Methodology**

The aim of Chapter 2 is to provide background and a detailed description of my methodology.

Section 2.1 describes characteristics of qualitative and quantitative methodologies and different approaches to research. Reasons for my research using qualitative case studies and my approach to analysis are discussed and my personal biases addressed.

Section 2.2 reviews ways and methods used to evaluate collaboration and critical thinking in asynchronous discussions and provides reasons for choosing the Community of Inquiry model for my analysis. Theoretical background, literature overview and details on how to use the Community of Inquiry model, are also provided.

Section 2.3 addresses ethical considerations such as participant's consent, confidentiality and anonymity.

Section 2.4 describes in detail my research methods and modes of analysis used within this research.

### **2.1 Methodology Theory**

This section provides definitions and background on research methodologies, approaches and methods, and explains the reasons for my choices.

Burgess (2006, p.53), defines research methodologies, approaches and methods as:

- Research methodology: this refers to general approaches to studying research methods
- Research approaches: being referred to as families of methods, including case studies, action research and surveys
- Research methods: these are specific techniques, tools, instruments and sub-methods, including interviews, observations, narratives, questionnaires, documentary analysis, et al.

### **Research Methodology - Qualitative vs. Quantitative Research**

The advantages and disadvantages of qualitative versus quantitative research has been a widely debated topic among researchers for many years. Trochim (2006, p.1), claims

*“There has probably been more energy expended on debating the differences between and relative advantages of qualitative and quantitative methods than almost any other methodological topic in social research.”*

Table 2.1 shows a brief summary of differences between qualitative and quantitative research (Based on Burgess, 2006; Trochim, 2006; Neill, 2007):

Table 2.1: Differences between Quantitative and Qualitative Researcher



Quantitative researcher:	Qualitative researcher:
Aims to classify features, count them, and construct statistical models in an attempt to explain what is observed.	Aims to provide complete, detail description
Uses tools such as questionnaires to collect numerical data	Researcher him/herself is the data gathering instrument
Is aiming to be objective – seeks precise measurement and analysis of target concepts, e.g., uses surveys, questionnaires etc.	Is subjective - individuals' interpretation of events is important, e.g., uses participant observation, in-depth interviews etc.
Tries to avoid influencing data collection. Attempts to understand the world as it is “out there” independent on personal bias and values.	Tends to become subjectively immersed in the subject matter.
Aims to ensure generalizability and options of replication for research.	Is willing to trade more detail for less generalizability.

However, in recent years “the war” between quantitative and qualitative approaches seems to have lessened and increasing numbers of researchers are choosing a more inclusive approach. In fact according to Gorard (2002), a researcher should not ignore or avoid evidence just because it might be the wrong kind.

My research questions are focused on student feelings and impressions, as well as instructor motivations, opinions and perceptions of support, and this work is intrinsically linked with the Slovak context. The subjective nature of questions like these, as well as the high dependence on context, suggests a more qualitative approach would be necessary. However, I did not hesitate to use quantitative methods, in data collection and analysis particularly, when this approach seemed likely to bring greater insight.

### **Research Approaches in Education**

Burgess (2006, p. 58), defines three basic approaches to research in education:

- Case studies – where the aim is “to find out facts and to understand according to particular contexts in terms of location and period of time”.

- Surveys and sampling – for example, “large scale investigations such as demographic surveys involving statistical data”.
- Action research – aimed at “problem solving and intervention”

I believe that my research approach represents a set of case studies. I will first provide my reasons here for not conducting action research or surveys, and then provide a more detailed definition of case study, and how it fits my research.

Action Research involves actions connected with data collection to influence changes that can be researched further (Greenwood and Levin, 1998). I have no personal connection to the institutions that were the focus of my study and even though I could not avoid a certain level of personal involvement, though it was not intentional and I attempted to keep my influence at a minimum.

Surveys and sampling as research approaches are most often connected with large scale collections of data (Burgess, 2006). Yet, there are very few online courses in Slovakia that use asynchronous discussions as a learning tool, so the available data pool is small. I attempted a small survey using questionnaires to learn about thoughts and feelings of students in each of the courses studied. Response rates were low, however, and data gathered from questionnaires represented a rather small amount of information compared to other methods of data collection I also used.

### **Case Study**

The following table was adapted from Creswell’s work (1998), as it provided a clear overview and an introduction to the discussion of the case study research approach.

Table 2.2: An overview of the most widely used qualitative research traditions

Dimensions for Comparing Five Research Traditions in Qualitative Research					
Dimension	Biography	Phenomenology	Grounded Theory	Ethnography	Case Study
Focus	Exploring the life of an individual	Understanding the essence of experiences about a phenomenon	Developing a theory grounded in data from the field	Describing and interpreting a culture and social group	Developing an in-depth analysis of a single case or cases
Discipline origin	Anthropology History Psychology Sociology	Philosophy Sociology Psychology	Sociology	Cultural anthropology Sociology	Political science Sociology Urban studies
Data collection	Primarily interviews and documents	Interviews	Interviews with 20-30 individuals to 'saturate' categories	Primarily observations and interviews with additional artefacts	Multiple sources, documents, records and observations
Data analysis	Stories Historical content	Statements Meanings Meaning themes General description	Open coding Selective coding Conditional matrix	Description Analysis Interpretation	Description Themes Assertions
Narrative form	Detailed picture of individual's life	Description of the 'essence' of the experiences	Theory or theoretical model	Description of the cultural behaviour of a group or individual	In-depth study of a case or cases

Source: Creswell, 1998 p.65

Creswell's overview highlighted the fact that the interview, as a research tool, is perhaps the most widely used of qualitative social research techniques, and as Osborne (1994), pointed out, the majority of qualitative methods have a phenomenological component (they ask participants to reflect on their views), without calling it phenomenology.

In order to define a case study, first we need a definition of a "case".

According to Gillham (2000, p.1), a case is:

- A unit of human activity embedded in the real world;
- Which can only be studied and understood in context;
- Which exists here and now;
- That merges in with its context so that precise boundaries are difficult to draw.

A case study can be further defined as an empirical enquiry that:

- investigates a contemporary phenomenon within its real-life context; when
- the boundaries between phenomenon and context are not clearly evident; and in which
- multiple sources of evidence are used (Yin, 2003, p.19)

Yin (2003, p.20), also claims that an ideal case study is when:

*“A how and why question is being asked about a contemporary set of events over which the investigator has little or no control.”*

This seems to fit my research well, as I focus on collaboration in online courses specifically within the Slovak context. The influence of the context is significant, but not easily distinguished from other influences, and I was using multiple sources of data. Having no affiliation with either of the institutions that I investigated, I had no control over the teaching and learning processes I researched.

Disadvantages and drawbacks of conducting a case study include (Stake, 1995; Yin, 2003):

- The presence of a researcher asking questions and probing into problems can create tensions and alter people's behavior, even if not intended
- The researcher being responsible for interpretation. It is necessary to be aware of all possible biases.
- Respondents disagree with each other, leaving it to the researcher to choose whom to give greater credence.
- The volume of collected data requiring the exclusion of some, leaving it to the researcher to select which data is dropped.

- The case study bringing results which apply only to that particular case. Generalizing results can be tricky; the ability to generalize is increased when more cases are included.

As these disadvantages are related primarily to concerns of researcher influence and bias, I was very careful not to express my personal opinions during interviews or informal talks with teachers and administrators and I tried to keep my influence on the process to a minimum. I am also aware of my own personal biases and opinions and I approach my data selection (decisions on which data to drop) and evaluation (choosing whom to give greater credence in case of disagreements) very carefully. Generalizing results of my research based only on two case studies is tricky and I acknowledge the problem and address the issue in Chapters 6 and 7.

### **Analyzing Qualitative Data**

There are numerous approaches to analyzing qualitative data, among the most common being Grounded Theory and Framework Analysis (Mason, 1998).

Grounded Theory was created by social scientists Glaser and Strauss (1967).

Their goal was to provide a methodology that enables social theory to be systematically generated by data. Grounded Theory is an approach to research as a whole and can employ various techniques (Lacey and Luff, 2009). Grounded Theory analysis is inductive, in that the resulting theory ‘emerges’ from the data through a process of rigorous and structured analysis.

Framework Analysis (Ritchie and Spencer, 1994) was developed for the context of applied research with an aim to meeting specific information needs and to provide outcomes and recommendations.

Framework Analysis incorporates the following stages:

- Familiarization (transcription and reading of the data)
- Identifying a thematic framework (an initial coding framework based on situation and data familiarization, which might be developed and adjusted in later stages)
- Indexing (applying a thematic framework to the data using coding)
- Charting (using headings from a thematic framework to read data across the whole dataset)
- Mapping and Interpretation (searching for patterns, associations, concepts and explanations)

In my overall data analysis I loosely followed the Framework Analysis concept. However, since my data volume was relatively low, identifying the thematic framework, indexing, charting and interpretation were not always conducted as separate stages.

### **My Position and Biases**

Personal bias of the researcher, and the fact that all data is filtered directly through the eyes of the data collector, is one of the main points in the widespread criticism of qualitative research (Borman at al., 1986; Patton, 1990). In order to overcome these issues, researchers need to become self-critical or seek the comments of other researchers or colleagues, to help with clarification and avoiding modifying results.

Another important issue is the interpretation of results in qualitative research. If the researcher is an instrument of data collection, gathering information, analyzing it inductively, focusing on meaning of participants and describing a process (Creswell, 1998), then the analysis can be strongly influenced by perceptions, points of view and experience of the researcher (Säljö, 1996). However, Jelfs (2004) argues that we all interpret what others are saying based on our experience and the listener places the

emphasis on specific sentences. The only way to rectify this problem is to attempt to stand outside of the data and to “bracket” my pre-suppositions.

I grew up in Slovakia and got my first master’s degree at Comenius University, in Bratislava in 1992. Both my parents are teachers at the Comenius University, so I have an insight into the system both as a student and from the point of view of its teachers. From 1994-2003, I worked as a program manager for the Open Society Foundation in Bratislava, responsible for programs directed to promote higher education reform. In 2000-2003, I also took on responsibility for a project directed to promote online learning development at Slovak higher education institutions. I worked with universities around the country and got to know teachers and administrators in higher education and the difficulties they faced.

I have graduate-level experience as a student from the University of British Columbia in Vancouver, B.C., and currently at the Open University. Since 2004, I have been living and working mostly outside of Slovakia (in Czech Republic, Uganda and the USA).

Although I believe I know the environment, I am not directly involved in a working relationship with any of the institutions or courses that are part of this research, which can be considered an advantage. However, over the years of working together, I consider some of the teachers and administrators responsible for the courses I researched as friends. This makes it a bit harder to take an independent position when researching their work.

In my research, I separated data description and analysis from my own input. I also attempted to bracket my own opinions and reasoning in analysis.

I am aware of my own enthusiastic personal view on collaboration in online education and put in an effort to keep it separate from descriptions of data and analysis. I had my supervisor’s continuous input providing critique and

demanding clarification of my interpretations. I also have family ties to a Slovak higher education expert (my father, who served as Minister of Education in Slovakia in 1991-1992), whose views on online learning policies and directions slightly differ from mine, and who went over my work, demanding explanations to all of my analyses and conclusions.

### **Summary of section 2.1**

The differences, advantages, and disadvantages of qualitative versus quantitative research have been widely debated topics among researchers for many years. Recently, however, more and more researchers adopt an inclusive approach using both data collection and analysis together in order to get better insight. This is also the case with the research presented here.

The overall number of online courses in Slovakia is rather low and only few of those actually use collaborative methods. So it was clear from the beginning that my research will be more heavily based in qualitative than quantitative approaches.

Among five traditions in qualitative research listed by Creswell (1998), my investigation into perceptions, views and needs of teachers and students in educational institutions, mostly fits the definition of case study. In my overall data analysis I loosely followed the Framework Analysis concept.

Qualitative researchers need to be aware of their own biases and take pains to “step aside” (Ashword and Lucas, 1998), occasionally, in order to limit their influence. I am aware of my personal relationships and family ties to some of the people working for the institutions I researched, as well as of my personal enthusiasm towards collaborative teaching approaches, and I did my best to limit the influence of my biases on my research.



## **2.2 Evaluation of Collaboration and Critical Thinking**

This section reviews literature on different methods for evaluation of collaboration and critical thinking, and provides the reasoning behind my choices.

There are a number of options on how to collect data and evaluate text-based discussions. Most common are student feedback questionnaires, interviews and analysis of discussion content (Rourke and Anderson, 2002). Some authors also recommend asking students to reflect on their experience, to comment on their own work and work of their peers (Garrison and Anderson, 2003; Palloff and Pratt, 2005). This can be done by asking students to keep journals or blogs through the course (Conrad and Donaldson, 2004), or by creating additional discussion forums focused on course design and student's feelings and experience (Bates and Poole, 2003).

Discussion content is either evaluated as a whole against a rubric or post-by-post using one of the discussion analysis frameworks. Usually instructors create their own rubric to assess discussion (Palloff and Pratt, 2003). Hence, the literature only provides suggestions for rubrics criteria.

Palloff and Pratt (2003, p.91) list attributes of critical thinking which could be useful for rubrics:

- clarity of ideas and expressions
- consistency of behaviour and thinking
- openness to learning
- evaluation of material
- communication

- specificity of feedback
- accessibility for discussion
- flexibility
- risk-taking

In order to get a more exact view into critical thinking processes, a more detailed post-by-post discussion content analysis, using some quantitative methods, could be conducted.

### **Discussion Transcript Analysis and my Choice of Analytical Model**

The fact that online discussion leaves a written record enables teachers and researchers to conduct a more thorough evaluation and analysis. However, consent not only from lecturers, but also from students is necessary for such an evaluation. Of course, a simple counting of posts made by students will not provide any insight on the quality of discussion. Typically, a framework for categorization of student posts or parts of posts is used to quantify of critical thinking present in discussion.

Following table shows an overview of different frameworks for discussion transcript analysis.

Table 2.3 – Frameworks for discussion transcript analysis

Model and Author	Description	Notes
Henri (1992)	Framework has five dimensions: a participative, social, interactive, cognitive and meta-cognitive	This analysis is complex and the categories for placements of parts of messages are only vaguely defined, leaving evaluators with room for interpretation and adjustments
Interaction Process Analysis (IPA), created by Bale in 1950, adapted by Fahy (2006)	Model classifies interaction in groups of learners according to its positive and negative socio-emotional content, and the amounts of giving or asking for task-related input.	Created by adapting model developed for evaluating face-to-face discussion
Bloom's Taxonomy of educational objectives developed by Bloom (1956), adapted for instance by Meyer (2004)	Taxonomy defines six categories of student contributions: knowledge, comprehension, application, analysis, synthesis and evaluation	Created by adapting model developed for evaluating face-to-face discussion
Transcript Analysis Tool (TAT) developed by Fahy (2006) based on work of Zhu (1996)	TAT defines five categories of student contributions: questioning, statements, reflections, scaffolding and references	
Pena-Shaff and Nichols (2004)	Model distinguishes between 11 categories: question, reply, clarification, interpretation, conflict, assertion, consensus building, judgment, reflection, support and other.	Statements of clarification, interpretation, conflict, assertion, judgment, and reflection appear to be most directly related to the knowledge construction process (De Wever et al., 2005)
Community of Inquiry Model (Garrison et al., 2000)	Separate transcript analysis models were developed to assess social presence, cognitive presence and teaching presence	Widely used model.

By using any of the transcript analysis models, it is possible to gain valuable information on critical thinking and cognitive processes present in discussions. However, transcript analysis also carries some problems that need to be taken into account. There are issues of objectivity and reliability. Objectivity gets questioned in the process of categorizing and grading messages, where the subjective criterion of the interpreter plays a role (Rourke et al., 2001; Fahy, 2006) and hence, the reliability of the analysis itself needs to be assessed.

There are also researchers who have raised doubts about the reliability of using discussion transcripts to try to understand collaborative processes in an online course. For instance, Jones and Cawood (1998), argue that since students use other means of communication besides asynchronous discussion (like face to face meetings, telephone, private messaging etc.)

for collaboration, discussion transcripts are only partial - and hence unreliable, records of collaborative activity.

Even though I am aware that discussion transcripts do not provide a full picture of collaboration in a course, I believe that using it as an additional source of information on collaborative processes might still prove valid and useful. I am using transcript analysis as only one source of information, alongside interviews and questionnaires.

My goal for transcript analysis was to get as much information as possible on how students embrace (or do not) collaboration, what they do, and how they react. It was very important to get as much information as possible on different aspects of collaboration – critical thinking, social interaction and interaction with instructor in these discussions. The Community of Inquiry model (COI), created by Garrison, Anderson and Archer in 2000, seems to serve my purposes best:

- Besides measuring cognitive presence (“depth” of discussion or critical thinking), it also provides information on social interaction within discussions (social presence) and looks at the activities and interactions of the instructor (teaching presence). This enables me to look at discussion threads from more than one angle and get better perspective on reasons for success or failures in discussions.
- Researchers around the world have used the COI model for over 10 years with research results published in order to compare to my findings. Garrison and Arbaugh (2007), made a convincing case that the COI framework has become one of, if not the leading models guiding research into online teaching and learning in higher education. They observed that the original article that laid out the framework for COI has been cited in more than 225 other published articles. It also came out as the most frequently cited paper in the Elsevier journal, *The Internet and Higher Education*.

Next section focuses on theoretical background and literature overview on the COI model for discussion analysis, as well as its limitations.

## **Summary of section 2.2**

There are many methods for evaluation of collaborative activities. Primarily, researchers gather data from student questionnaires, interviews with students and teachers, and discussion content analyses. Often, students are encouraged to reflect on themselves, on classmates, and on course design, in order to provide further data for evaluation. Beside qualitative evaluation of the quality of discussions, there are a number of models using a combination of qualitative coding and quantitative analysis of the number of posts or smaller text units. These methods can be valuable, bringing insights on critical thinking and cognitive processes present in discussions. However, consent from lecturers as well as from students is necessary for such an analysis, and issues of objectivity and reliability need to be addressed.

I decided to use transcript analysis as an additional information source beyond questionnaires and interviews in my research, and I chose to use the Community of Inquiry Model for it, because this model allows me to gain insight into additional aspects of communication in discussion (cognitive, social and teaching presence), and has been used extensively, so I can easily find references to compare my research results with.

## 2.3 - Community of Inquiry Framework – Theory, Literature and its Limitations

Garrison, Anderson and Archer introduced the concept of a Community of Inquiry in 2000. The concept is based on the belief that knowledge construction in learning environments occurs through the development of a community of inquiry characterized in online education specifically by optimal levels of teaching, social, and cognitive presence (Garrison, et al., 2000).

They claim, that a “worthwhile educational experience is embedded within a community of enquiry, that is composed of teachers and students – the key participants in the educational process”. (p.2) as is shown on figure 2.1.

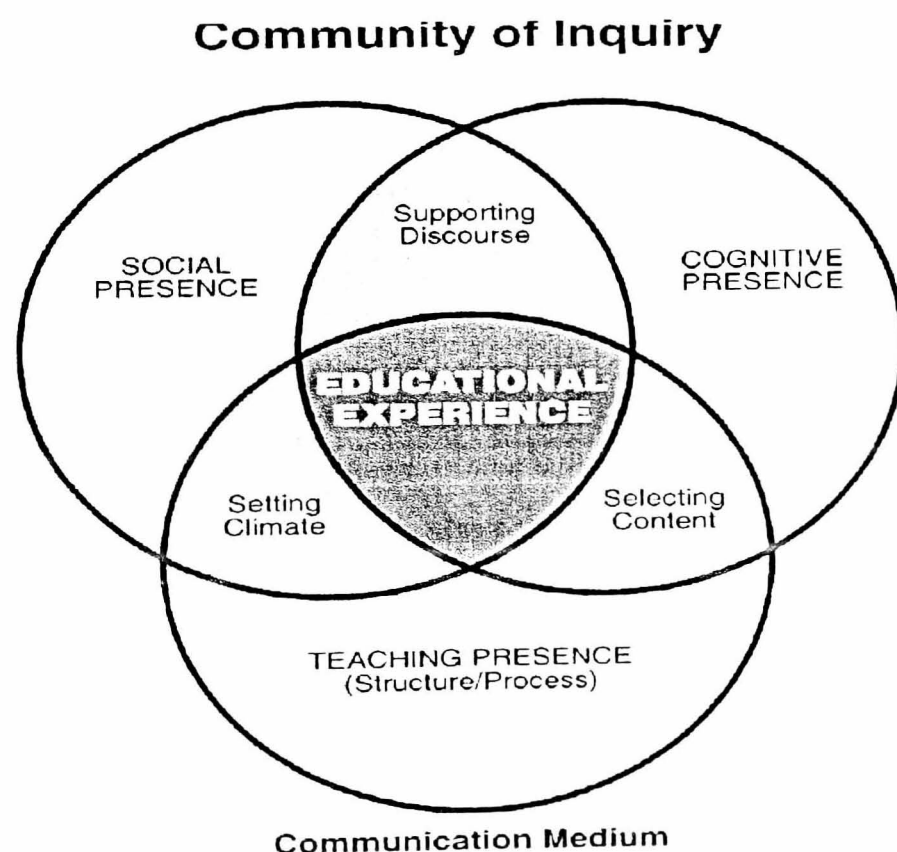


Figure 2.1: Elements of Educational Experience (figure taken from Garrison et al., 2000, p.2)

The model of Community of Inquiry assumes that learning occurs within the community through the interaction of three core elements, as shown in Fig. 2.1: cognitive presence, social presence, and teaching presence.

### **Cognitive Presence**

Cognitive presence is defined as the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication. Garrison et al. (2001) published a framework to analyze cognitive presence in discussion transcripts. They divide the critical thinking process in discussion into four phases. The first phase is a triggering event, when the issue, dilemma or problem to discuss emerges and is identified or recognized. It is often, but not always the role of the teacher to do this.

In the second phase, exploration, participants shift between the private, reflective world of the individual and the social exploration of ideas. This is a divergent phase characterized by brainstorming, questioning, and exchange of information.

In the third phase, integration, students start to construct meaning from the ideas generated in the exploratory phase. Authors stress that this phase “requires active teaching presence to diagnose misconceptions, to provide probing questions, comments, and additional information in an effort to ensure continuing cognitive development, and to model the critical thinking process.” (p.10) Garrison et al (2001), explain that students are often more comfortable to stay in the exploration mode, so teaching presence is essential in moving the process to more advanced stages of critical thinking and cognitive development.

The fourth phase is a resolution of the issue by means of direct action. In an educational setting this might mean a test using thought experiments and consensus building within the community.

Garrison et al. (2001) developed a set of indicators for transcript analysis to recognize the different phases.

Table 2.4. Critical Thinking Categories

Category	Indicator	Socio-Cognitive Process
1. Triggering	Recognizing the problem	Presenting background information that culminates in a question
	Sense of puzzlement	Asking questions
2. Exploration	Divergence within online community	Unsubstantiated contradiction of previous ideas
	Divergence within single message	Many ideas/themes presented in one message
	Information exchange	Personal narratives/descriptions/facts (not used as evidence)
	Suggestions for consideration	Author characterizes message as exploration: "Does that seem right?"
	Brainstorming	Adds to established points but does not systematically defend/justify/develop
	Leaps to conclusions	Offers unsupported opinions
3. Integration	Convergence among group members	Reference to previous message followed by substantial agreement
	Convergence within a single message	Justified, developed, defensive, yet tentative hypothesis
	Connecting ideas, synthesis	Integrating information from various sources
	Creating solutions	Explicit characterization of message as solution
4. Solution	Vicarious application to real world	
	Testing solutions	
	Defending solutions	

Source: Garrison et al. (2001, p. 15–16)

Garrison, et al., decided to use the whole message as the unit of analysis. They claim that using the whole message as opposed to sentences, or parts of messages, makes it easier when using multiple researchers to repeat the coding (message as a unit is clearly defined). Also, a complete message provides enough information for coders to infer underlying cognitive processes. In order to avoid problems with contradictory categorization, they used two heuristics for coders: *code down* (i.e., to the earlier phase), if



it is not clear which phase is reflected; and *code up* (i.e., to the later phase), if clear evidence of multiple phases is present. Garrison, et al., justify this procedure by noting that higher levels of critical thinking such as integration and resolution, borrow characteristics and processes from previous phases.

A number of other researchers later used this model for discussion transcript analysis. For instance, Schrire (2004), analyzed doctoral degree courses in computing technology in education offered at a U.S. university, and Meyer (2004), assessed doctoral level classes in educational leadership. Stein, et al. (2007), analyzed discussion threads in a blended course at a large Midwestern university about the philosophical and historical roots of adult education in American society.

Table 2.5 shows an overview of percentages of cognitive presence categories across different studies.

Table 2.5: Percentages of cognitive categories across studies

Study	Trigger	Exploration	Integration	Resolution	Other
Fahy (2005)	9.1	71.6	14.1	1.7	3.5
Garrison, et al. (2001)	8	42	13	4	33
McKlin, et al (2002)	3	39	9	1	48
Meyer (2003)	18	51	22	7	3
Meyer (2004)	18.3	27	32.4	19.8	2.5
Pawan, et al (2003)					
	32	27	-	-	41
	22	56	17	-	6
	4	83	2	-	11
	10	87	2	-	2
	8	57	32	-	3
	9	51	19	-	21
Schrire (2004)	14	41	33	9	3
Stein et al (2007)					
	9	29	16	2	45
	5	44	9	1	42
Vaughn & Garrison (2005)	8	61	16	1	14

Table created according table published in Stein et al, 2007, p. 112

## Social Presence

A template for assessing social presence was published by Rourke et al. in 1999. Social presence is defined as the ability of learners to project themselves socially and emotionally in a community of inquiry. The function of social presence is to support the cognitive and affective objectives of learning (Garrison et al., 2000). Social presence supports cognitive objectives through its ability to support critical thinking in a community of learners. It supports affective objectives by making the group interactions appealing, engaging, and thus rewarding. (Tinto, 1987).

Rourke, et al. (1999), developed three categories with indicators that researchers can use to analyze social presence in discussion transcripts. The first category contains affective responses. The expression of emotion, feelings, and mood is a defining characteristic of social presence. Affective interaction includes closeness, warmth, affiliation, attraction, or openness. Of course, in text-based online communication, body language, facial expressions, and vocal intonations are eliminated, but there are still ways to express emotions. For instance people could use emoticons, humor or self-disclosure.

The second category is *interactive responses*. Interactive responses are to provide evidence that the other person is participating and paying attention (Short, et al., 1976), as a critical feature of socially meaningful interaction. Interactive responses should indicate interpersonal support, encouragement, and acceptance of the person. Using the “reply” feature to post messages, quoting directly from the conference transcript, and referring explicitly to the content of others’ messages are all types of interactive response.

*Cohesive responses*, the third category of posts, are exemplified by activities that build and sustain a sense of group commitment. It is defined in our analysis by three indicators: phatics and salutations, vocatives, and addressing the group as “we,” “our,” or “us”. (Rourke, et al., 1999)

The ratio of posts containing social presence indicators reveals the level of social presence in an online community. Low frequencies indicate that the social environment is cold and impersonal. High scores indicate that the environment is warm and collegial. List of categories and indicators is shown in Table 2.6 below.

Table 2.6. Social Presence Categories

Category	Indicators	Definition
Affective	Expression of emotions	Conventional or unconventional expressions of emotion, includes repetitious punctuation, suspicious capitalization, emoticons...
	Use of humour	Teasing, cajoling, irony, understatement, sarcasm
	Self-disclosure	Presents details of outside of class or expresses vulnerability
Interactive	Continuing a thread	Using reply feature of software, rather than starting a new thread
	Quoting from other's messages	Using software feature to quote other's entire message, or copy and paste selections
	Referring explicitly to other's messages	Direct references to contents of other posts
	Asking questions	Students ask questions to other students or the moderator
	Complimenting, expressing appreciation	Complimenting others or contents of other's messages
	Expressing agreement	Expressing agreement with others or contents of other's messages
Cohesive	Vocatives	Addressing or referring to participants by name
	Addresses or refers to the group using inclusive pronouns	Addresses the group as we, us, our, group
	Phatics, salutations	Communication that serves a purely social function, greetings, closures

Source: Rourke (1999), p. 58–59

Rourke, et al. (1999), could not use whole messages as the unit of analysis because very often there are numerous indicators of social presence within one message. They conducted their analysis on two selected threads from graduate courses on workplace learning, and on theory and practice in distance education. In order to determine the ratio of indicators, they counted the number of indicators shown in a discussion thread and divided it by the number of words in the entire thread. They then multiplied the social presence density figure by 1000 and ended up with a number showing the unit of incidents per 1000 words. The aggregate social presence density for transcripts they analyzed was 22.83 and 33.54, respectively.

Among other researchers focusing on social presence during the last decade, are Lomnicka and Lord (2007), who analyzed the connection between social presence and technological tools within a course for foreign language teachers in Florida. Nippard and Murphy (2007), explored social presence in a web-based secondary synchronous classroom.

In 2009, Shea and Bidjerano conducted a study on more than 2000 online learners and found that the more than 70% variance in students' reported cognitive presence could be predicted based on perceived teaching and social presence (p. 548).

On the other hand, results of the study conducted by Shea, et al. (2010, p.17), imply that several specific indicators of social presence are very difficult to interpret reliably. They claim that the

*“...social presence construct is somewhat problematic and requires further articulation and clarification if it is to be of use to future researchers seeking to inform our understanding of online teaching and learning.”*

### **Teaching Presence**

A tool to assess teaching presence in discussion transcripts was first published in 2001, by Anderson et al. The concept of teaching presence is defined as having three categories – design and organization, facilitating discourse, and direct instruction. Table 2.7 below shows categories and indicators for each of them.

Table 2.7: Teaching presence categories and indicators

Category	Indicators
Design and organization	Setting curriculum
	Designing methods
	Establishing time parameters
	Utilizing medium effectively
	Establishing netiquette
Facilitating discourse	Identifying areas of agreement/disagreement
	Seeking to reach consensus/understanding
	Encouraging, acknowledging or reinforcing students contributions
	Setting climate for learning
	Drawing in participants, prompting discussion
	Assess the efficacy of the process
Direct Instruction	Present content/questions
	Focus the discussion on specific issues
	Summarize the discussion
	Confirm understanding through assessment and explanatory feedback
	Diagnose misconceptions
	Inject knowledge from direct resources. e.g. textbooks, articles, internet, personal experiences
	Responding to technical concerns

Source: Anderson, Rourke & Garrison (2001) p. 8-10

Anderson, et al. (2001), used the whole message as a coding unit. Since one message might show signs of two or three different categories, each message posted by the instructor was coded as exhibiting or not exhibiting one or more indicator of each of the three categories of teaching presence. They conducted teaching presence analyses on transcripts from one health and one education graduate course. Instructor messages in these courses showed 22.3% and 37% as instructional design, 43.2% and 75% as facilitating discourse, and 77% and 87.5% in direct instruction.

**Connection between Cognitive, Social, Teaching Presence and other Aspects of the Course.**

A number of researchers studied the influences of cognitive, social and teaching presence on each other, and on other aspects of the course.

Kanuka et al. (2007), investigated the influence of different group activities in an online course on cognitive presence. They concluded that the most successful activities had three common features:

- They were well structured
- They provided clearly defined roles and responsibilities for students
- They provoked the students to explicitly confront other's opinions

Rovai (2002, p. 319), explored the connection between a student's sense of community and cognitive learning. He concluded that there is a strong relationship between classroom community and perceived cognitive learning:

*"Online learners who have a stronger sense of community and perceive greater cognitive learning should feel less isolated and have greater satisfaction with their academic programs, possibly resulting in fewer dropouts".*

In a similar tone, Richardson & Swan (2003) confirmed that students with high overall perceptions of social presence also scored high in terms of perceived learning and perceived satisfaction with the instructor.

Pawan et al. (2003), explored the influence of teaching presence on cognitive participation. They concluded that without teaching guidance, students tend to carry discussion as "serial monologues".

There have been a number of studies on the Community of Inquiry model that confirmed a strong influence of teaching presence on social presence (Shea and Bidjerano, 2009). This suggests that a teacher's input influences the social interaction of students.

Shea, et al. (2010), conducted research with the goal of distinguishing whether social presence of students is linked more to an instructor's teaching presence (instructional design, facilitation of discourse, and direct instruction), or social presence (affective expression, open communication, cohesion). On p.17 they conclude:

*“...the correlation between instructor social presence and student social presence appears even stronger than between instructor teaching presence and student social presence. “*

### **Limitations of COI Model**

A number of studies that use COI to evaluate online discussions also pointed out weaknesses of the model. Rourke (2009) points out that the COI model focuses more on the teaching process than on student learning. Shea, et al. (2012), also suggest to increase focus on self-learning and to introduce a fourth component – learning presence, which would monitor efforts of students in connection with the teacher's guidance.

However, the limitation which became most evident to me during this research concerned teaching presence. Tannis Morgan (2011) describes this problem in detail. She claims that the construct of teaching presence in the COI model describes what kind of interaction a teacher uses, but does not provide any information on decision making by the instructor or reasons for such decisions.

## **2.4 Research Methods Used**



As stated in the previous section, my research took a mostly qualitative approach, using case studies as the main vehicle. This section describes details of how my choices in focus and methodology developed over time, how the case studies were identified and which methods of data collection and analysis were used.

### **Change in title and focus of the research**

Expecting that it might not be easy to find institutions offering collaborative online courses in Slovakia, my original research proposal from January 2008 had a wider regional focus, encompassing both the Czech Republic and Slovakia. The proposed title of the project was “Online Collaboration and Community Building in an Environment with Authoritarian Teaching Traditions in the Context of Czech Republic and Slovakia.” The reasons for using this wider scale were:

- Within the given time frame for this research allowing me to deeply explore only two to three case studies, using a wider region would provide a greater choice of institutions to serve as subjects
- Up until 1993, the Czech and Slovak Republics coexisted as Czechoslovakia, and there are many similarities among their education system and policies
- My fluency in the Czech language would enable me to easily collect and analyze data from institutions in that country

However, very soon after starting the literature search, I discovered that:

- Legislative policies and higher education system reforms since 1993 differ between the Czech and Slovak Republics, and even though there are still many similarities, the differences are much more significant than I anticipated.
- When comparing two or three case studies from two such different environments, it would be very hard to distinguish which

differences can be assigned to environment and which to other factors

- It might be possible to find two or three institutions offering collaborative online courses in Slovakia only.

Hence after consultation with my supervisor I restricted the focus of research to Slovakia only, and also decided to simplify the title, currently: “Collaboration in Online Courses in Slovakia”.

## **Case Studies**

In an effort to find institutions in Slovakia which use collaboration in online courses, I first browsed websites of higher education institutions and their course prospectus. I also did a literature search and read through proceedings from local e-learning conferences and attended a national e-learning conference in November, 2009. The online learning community in Slovakia is relatively small and is well networked, so I also used personal contacts and sent out a number of inquiries via email to friends and acquaintances. Asking people to put you in touch with other people to get samples for research is called the “snowball technique” (for instance Mason, 1996). Gaining information this way is obviously influenced by the personal contacts and preferences of the people involved. However, personal contacts and word of mouth play an important role in a community this size and I did not want to dismiss it as a potential source of information. In this way, I was quickly pointed towards the private College of Management, where discussion forums are extensively used. The College of Management became the first of my case studies.

I came upon a number of projects – mostly funded either from EU grants or independent donors that showed promise. I put efforts into generating something useful for my research from these. However, none of these projects had a plan for diversifying or sustaining their funding, and all of them ceased to continue after the initial grants ended. The project I used for

my pilot study, which ran in 2007 and 2008, and was funded by the Open Society Foundation, was one of those.

There was another set of large EU funded projects starting up in 2008, with funding for three years. Among these was a consortium of five large Slovak public universities which pooled their resources to develop and maintain online courses for teachers around the country. Some of the courses in this online program were experimenting with using asynchronous discussions to enhance learning, and I thought this would make an interesting case study.

I gained agreements and interviews from project administrators, but for about a year and a half – from summer 2009, to end of 2010, I was not able to gain access to the courses discussion forums. Despite urging from project and university administrators, the technicians ignored my emails and phone messages, and never created the account to give me access to the forums. I eventually gave up.

In the meantime, I discovered that two teachers who were the only ones promoting the use of discussion in online courses within this large project, were both from a particular department at the Comenius University, and they also used discussions in their own courses at the department. (In order to maintain the anonymity of people at Comenius University who provided me data and information, I will refer to the department I used for research, simply as “the department”, throughout the study.)

Both of the teachers were willing to help me and allowed me use of their courses at the department for research. As my second case study, I decided to focus on Comenius University and this particular department.

### **Introductory Interviews with Administrators and Teachers**

In the first stage I interviewed administrators and teachers from both College of Management (known as “Vysoka skola managementu” in

Slovak, with the acronym VSM) and Comenius University with a goal to understand how online learning works at their institutions. I mostly allowed interviewees to speak freely on each topic, to gain ideas and information.

Interviews were semi-structured around the following six areas:

- Introduction - to gain personal perspectives on using student-to-student collaboration in online courses
- Institutional organization and operation - to learn how online learning was carried out at these institutions
- Support for teachers - to understand what level of support teachers received
- Teaching - to learn what instructional methods and strategies were being used
- Support for students - to learn how the needs of online students were addressed
- Problems Summary - to learn what interviewees considered to be the biggest problems and most significant challenges to successful implementation of collaboration in online courses, both at the institution and in Slovakia in general.

An introductory interview at VSM was conducted in November, 2009, and was more like a group interview, with the vice-rector, curriculum director and one of the teachers all present. This was their preferred interview arrangement, claiming they held no views private from one another. I agreed but insisted that the teacher interviews in the second stage were to be one-on-one - so that if teachers were going to change tone when having privacy, there would be opportunity to do so.

In November, 2009, when I started to conduct introductory interviews, I still anticipated being given access to discussion forums within the large inter-university project, and so interviewed administrators and teachers from the project. When I later switched focus to the department at Comenius University, the teachers I interviewed remained the same, but I

had to add on interviews with administrators. I interviewed the head of the department in July, 2010, and Comenius University administrators in February, 2011.

### **Interview analysis**

All of the interviews were conducted in Slovak. Even though most of my interviewees speak English fluently, they found it easier to express their ideas and feelings in their first language. With their consent I recorded all the interviews.

I created full Slovak transcripts of each interview. From these I created shorter English summaries in which I skipped parts of discussions that veered off topic and summarized parts where interviewees were repetitive. However, I made sure to include direct translations of key points made. For the most part I used the English summaries when writing up results for the research, going back to the Slovak transcripts for clarification and to verify my own translations.

### **Course Monitoring**

Unfortunately, one of the two teachers at Comenius who was using discussions to enhance learning in online or hybrid courses, left in summer 2009, for two years on maternity leave. There then remained only one teacher whose courses I could monitor and analyze – I will call him Robert. I monitored one of his courses in spring 2010, and another in the fall 2010.

VSM offers almost all its courses in both face-to-face and online forms, thus I had a wide choice of subjects to choose from for courses to monitor. I settled on the two teachers who volunteered their courses for research. I will call them Peter and Henrich. I monitored one course taught by each in the spring and fall terms of 2010.

## **Discussion Analysis**

From each of the courses I monitored, I picked one discussion thread to conduct analysis for cognitive, social and teaching presence. Discussion in courses at Comenius University was voluntary and in most weeks students did not get involved in any long exchanges. There ended up being only one thread in each course from Comenius University long enough to conduct analysis on. Choosing a thread for analysis was more complicated for courses at VSM, which all have weekly obligatory discussions. In the three courses, all weekly discussion threads were rather similar in student involvement and I sought to choose threads that seemed to be going marginally deeper into the subject matter than others. In one course, the final weekly discussion showed signs of students being significantly more involved, and I chose this exceptional thread to analyze, hoping to find a positive example.

## **Reliability Issues in Discussion Analysis**

Discussion analysis using the Community of Inquiry Model requires the researcher to place messages or parts of messages into different categories. In order to ensure reliability, at least two researchers typically take responsibility for the coding of messages or parts of messages. This was the case for my initial study, however I was not able to secure my colleagues' cooperation to serve as an additional coder for the entire dissertation project.

Therefore, in order to achieve at least some degree of reliability, I have done all the coding twice – letting two months pass between attempts, hoping to pinpoint the messages which I was not sure where they belonged or made decisions based on unclear reasoning or a whim.

Since the numbers of messages in the threads I was conducting analysis on were relatively low (ranging from 16 to 56 messages), I succeeded in

identifying loosely categorized messages (there were less than 10% of them), and asked for input from friends and colleagues on these few occasions before making final decisions.

## **Questionnaires**

Based on results of these interviews, as well as background information on institutions and courses gained from handouts, websites and publications, I was able to develop a simple questionnaire for students. The questionnaire contained one Likert Scale question measuring satisfaction with discussions in their online course, and six open ended questions inquiring about what they consider positive and negative features of online discussions, what problems they experienced, and how they think these problems can be resolved. The text of the questionnaire is in Appendix 2.

After conducting discussion analysis for the first three courses, I added two more open ended questions to the questionnaire inquiring about student's perceptions of their instructor's involvement in online discussions.

I collected 31 questionnaires in the six courses. In almost every course there was at least one student who seemed to misunderstand the scale on the Likert scale question (the number marked in the Likert scale was significantly different than what the open ended answers suggested). In these cases, I applied an average for the overall satisfaction for each course, ceased further statistical analysis, and focused on qualitative analysis of the open ended questions.

For each course, I copied open ended answers into excel spreadsheet to be able to see common features between answers within one course. Due to the small amounts of questionnaires, spreadsheets were easily manageable. Then I compared answers in spreadsheets for different courses looking for common features and differences.

## **Interviews with Instructors**

After monitoring the first three courses in spring, 2010, I interviewed the three course instructors in July. I provided them with summaries of the results from the questionnaire and discussion analysis of their courses, and asked for their thoughts on these.

Here again the interviews were loosely structured and I occasionally let interviewees wander off topic, if the information provided seemed interesting. This approach enabled me to gain very interesting and useful insights.

## **Interviews with Students**

In the final phase, I sought to interview the 31 students who completed the questionnaires and had provided their email addresses to me, but only 3 agreed to be interviewed. In the interviews, I asked each student to elaborate on the answers they provided in the questionnaires and I also provided my research questions that focused on students' perceptions, asking them how they would answer these questions.

## **Summary of section 2.4**

Very early in my literature search I realized that the region for my research (considering the differences between Slovak and Czech higher education systems, legislation and policies) is too large to cover within the scale of my research and decided to change my dissertation title and to focus only on Slovakia.

The online learning community in Slovakia is relatively small and well networked, so besides browsing websites and conference proceedings, I



also used the “snowball technique” to get contacts through people I know. I settled on two case studies: at the private VSM, and the public Comenius University.

I first conducted introductory interviews with administrators and teachers of both institutions to gain an understanding on how online learning works at their institutions. I then monitored two online courses at Comenius University and four at VSM, in the space of two semesters. I also conducted transcript analysis using the Community of Inquiry Model on one weekly discussion thread from each course. At the end of each course, I collected questionnaires from students.

After the first semester of monitoring I went back to interviewing the teachers. This time I showed them the results of the questionnaires and transcript analysis and asked for their opinions on it.

Finally, I interviewed a small number of students from both institutions in order to get more input on their perceptions and perspectives.

## **2.5 Participant Consent, Confidentiality and Anonymity**

Consent is considered one of the cornerstones of ethical research in education (Gall et al., 2007), and except for the cases where deception is relatively benign and integral to the research purpose, informed and voluntary consent must be obtained from all participants (Kanuka and Anderson, 2007).

Obtaining consent from administrators, teachers and students I interviewed was quite straightforward. Prior to the start of the interview they read and signed a consent form agreeing to participate in the project and having the

data used for research and publication. Within the consent form I also promised confidentiality and anonymity.

The introduction section to the student questionnaires also included a similar consent clause, by which students gave their consent simply by submitting the questionnaire, and receiving the assurance of confidentiality and anonymity. A number of interviewees expressed surprise about my insistence that they to read and sign the consent forms, as this is not a regular practice in Slovakia. My interviewees emphasized that they trust me personally to maintain confidentiality and anonymity, not the piece of paper giving the consent.

The issue of obtaining consent became more complicated for transcript analysis. Since course participants are geographically dispersed and harder to contact, obtaining consent is generally more complicated for online courses (Garrison and Anderson, 2003). Some universities simply publish general announcements on the course website, stating that transcripts will be used for research purposes and students who object should contact an administrator (for instance, Athabasca University according to Kanuka and Anderson, 2007). However, in their article on ethics in e-learning research, Kanuka and Anderson (2007) insist that in order for the participants consent to be informed, participants need to be provided the following information:

- A statement of the research purpose
- The identity of the researcher
- The expected duration
- The nature of the participation
- Description of research procedures

I created an announcement containing all necessary information and insisted that course instructors place it on the course site at the very beginning of the course. I also explained that, although I will analyze the

discussion content, no quotes will be used without asking for permission. The announcement opened automatically and gave them an option to express a wish to not participate in the research by clicking a button, with no need for contacting an administrator independently in order to explain their reasons.

The instructors I worked with were confused at this additional step, convinced that the agreement to use transcripts was ethically sufficient, and no further agreement from students should be necessary. But I still insisted on this, and not one student within the six courses that were part of my research expressed a wish to not be included. I later asked students during the interviews about their opinions on having to give consent for transcript analysis, and they all said that they were confused by it, not expecting to be asked for permission to have course transcripts analyzed. They all said they had no reason why they might refuse. It seemed like they expected their instructor to use course transcripts as he/she wishes anyway, and they do not think that their refusal of consent would have changed anything.

I provided anonymity to administrator and teacher interviewees by not revealing their names or any other potential identifiers, such as gender (I refer to every research participant in the masculine form as is the usual practice in Slovak language), age or position. The issue of revealing the names of institutions that became my case studies was harder to settle. There is only one private college in Slovakia that provides online courses (being VSM), and there is only one public university in Slovakia that has close to the 27,000 students of Comenius. So even without revealing the names of the institutions in my research, anyone who has some overview on Slovak higher education will know precisely which institutions I was working with. I mentioned this issue to the administrators who provided me with interviews and it was generally agreed that for the purposes of my dissertation I will disclose the names of the two institutions.

## **Summary of section 2.5**

Voluntary consent needs to be obtained from all research participants. Interview participants signed a consent letter, and a consent request for questionnaire participants was included with the questionnaire. In order to obtain informed consent of course participants for transcript analysis, I asked instructors to post an explanatory announcement onto the course websites, which enabled students to opt out with a click, and without needing to state their reasons. None of the students opted out and when I asked for opinions about this from those that I interviewed, they said they did not see any reason why they would opt out.

I was able to provide anonymity to my interviewees, though anonymity for my case studies institutions turned out to be harder to provide. Administrators of both VSM and Comenius University agreed to have the names of their institutions revealed in this study.

## **2.6 Conclusions**

Chapter 2 concluded the first part of this research report which provided reasoning and theory behind the research questions, background information on authoritarian traditions in Slovakia, as well as methodology theory and detailed description.

In the ensuing chapters I will move onto case studies, results of my research and analysis.

## **Chapter 3 Case Studies**

This chapter provides background information on the institutions that served as case studies for this research. I describe institutional policies on online learning, training and support provided to teachers and students, and provide administrator and teacher points of view.

Information was gathered from institution websites, published articles and annual reports, interviews with administrators and teachers, and from internal materials provided at these interviews.

### **3.1 VSM**

#### **General Information**

According to its website (College of Management, accessed on August 11, 2011), VSM was established by decree of the National Council of the Slovak Republic, on December 1, 1999, as the first private college in Slovakia. The founding partner of VSM is the City University of Seattle, which has been offering its business curricula in Slovakia since 1991 and had strong influence on introducing online learning at VSM. In fact, what is now VSM started as a local branch of City University of Seattle. The City University of Seattle offers the Bachelor of Science in Business Administration (BSBA), and Master of Business Administration (MBA), programs and its diplomas are accredited in the USA by the Northwest Commission of Schools and Universities NWCCU. The College of Management and the City University of Seattle have compatible programs for the bachelor program taught in English language, and they also share their international staff of instructors. In addition, cooperation with Gratex International (a Slovak software development company), enables VSM to offer specialization in the field of information systems.

VSM offers certificates, bachelor's and master's programs, taught in English or Slovak, in both full time and part time form. Programs offered in English – Bachelor of Science in Business Administration and Master of Business Administration, are identical to programs offered by City University of Seattle, and graduates can obtain a degree from both VSM and City University of Seattle. Programs offered in Slovak language only – Bachelor's degree in Business Management, Bachelor's degree in Knowledge Management, Master's degree in Knowledge Management, Certificate in Information Systems, Certificate in Green Management and the Intensive English Program, are accredited only in Slovakia and graduates obtain the degree from VSM.

### **Online Courses at VSM**

All of the courses that VSM provides within their part time program are also offered online. VSM has a very clear set of rules to regulate the development and teaching of online courses and these rules were adopted from City University of Seattle. According to what VSM administrators told me during the interview, they made the original rules slightly more directive, thinking that would be more appropriate for their Slovak teachers. The rules exist as a 4-page handout given to teachers during their initial training.

Some of the rules concerning development and teaching of online courses at VSM are as follows:

- Use of the Bulletin Board learning management system platform
- All courses must be developed for 100% online delivery, with no face-to-face student-teacher meetings required. Teachers are allowed to meet with students but this cannot be required, or essential for student success.

- Teachers must be “visible” online and accessible to students.  
Teachers should make posts online at least four days a week and be prompt in responding to student questions. For an online course of 15 students, teachers are told to expect to spend as many hours preparing, teaching, and evaluating student work as they spend on a classroom course of 30 students.
- Every course should include an interactive group experience. VSM states that although student-teacher interaction is important, student-student interaction is the key. Students should feel like part of the class and interact with each other.
- Every course instructor is required to include a weekly online group-based activity. These could be discussions, projects, case studies, peer feedback, etc. Students must make at least three substantive posts per week, interacting with each other, and they should not make all their posts on the same day.
- No synchronous activities which would require students to be online at certain times are to be used.

The teacher’s responsibilities during delivery of an online course are also defined and before the course begins a teacher should, among other things:

- Prepare the course bulletin board, which includes posting a welcome message, create student introductory assignment, develop weekly online activities and weekly assignments.
- Send a “Welcome E-mail” to all students by the first day of class.

In the first week of the course a teacher should:

- Set expectations for Bulletin Board, e-mail, and other course communication.
- Divide students into smaller groups for activities if the course is large (a group should have no more than 15 students).

Weekly, during the course a teacher should:

- Make posts in the course, at a minimum, on 4 days per week and ask students to do the same.
- Keep bulletin board organized, up-to-date, and consistent. Open separate threads for each activity or assignment, title threads appropriately, make announcements regularly and visibly, open/close activities on a standard schedule.
- Respond promptly to students' email and bulletin board questions.
- Be visible to students (make announcements, facilitate weekly activities etc.):
- Encourage students to participate and respond to each other, especially in the first weeks.
- Use a variety of course activities.
- Monitor and facilitate student activities. It is not necessary to respond to every post, but enter discussions to keep the activity alive and show students that you are "listening."
- Check each student's progress. Ask for periodic updates from students about their coursework.
- Ask for periodic feedback from the students to improve teaching.

Students are cautioned at the beginning of their studies that online coursework might and probably will take more time than face-to-face coursework. Students are also required to log into their online course at least 3-4 times per week and advised that students who do not participate in their online course for three consecutive weeks will be assumed to have left the course.

Between 10-30% of course grades in VSM online courses are based on student online contributions in discussions, case studies, homework, peer review, or other activities.



## **Introduction to Information from Interview**

My interview at VSM was conducted on November 16, 2009, with the two most senior administrators of the university, and one of the teachers. One of the administrators interviewed also teaches a number of online courses. It was a group interview with all three participants present. They suggested and preferred this format, claiming they will be better able to explain the school's methods and operations as a group, and that there are no secrets among them. The interview took approximately two hours. I was note-taking as well as audio-recording the full conversation, with the interviewees' written consent.

VSM first began operations without online learning. They had a visionary US teacher and a Slovak vice-rector with international experience, who pushed the transformation through only a few years ago. Once VSM made the decision to start offering online courses they modeled their system, including all rules and policies, from their sister college, City University of Seattle (CUS).

One of the administrators and the teacher I interviewed both came to work at VSM within the last couple of years, after the online learning system was established. They were hired knowing they were going into an online learning system, though having no prior experience in the field were prepared to learn.

The idea of using of online discussions was new to both of them as they had never considered discussion as anything useful to instruction in their face-to-face classrooms. However, they both claim that it was easy to adjust to the method and now think that using asynchronous discussions as a pedagogic device, particularly in the form it is used at VSM, is a good and forward-thinking idea and improves the quality of learning.

*“These students are adults with lots of practical knowledge.  
There are many issues to discuss that would not even occur to*

*me. So I encourage students to come up with issues and questions and it is really enriching.”*

### **Information from the Interview**

Courses run in three trimesters, and there are both full-time students and part-time students. Full-time students do most of their coursework face-to-face, but they can also take online courses. Part-time students can usually choose between face-to-face and online courses, depending on their program.

Each online course has weekly discussions. The teacher asks a question that is supposed to prompt critical thinking. Each student should answer the question in a substantial way and also react to an answer from at least one of their classmates. Five to six weeks into the trimester there is a mid-term exam, and after 10 weeks is a final exam. These exams are face-to-face even for online students. Those students that are abroad and can not attend exams in person find a suitably qualified university staff member locally, to conduct the test with them face-to-face.

Courses taught in English are produced by CUS, with only minor adjustments by VSM staff in adding Slovak case studies and examples. Courses taught in Slovak are created locally and content and quality are the responsibility of the teacher.

*“VSM has a policy of having the same teacher teaching both English and Slovak versions of the same course. This is the best way to keep quality of both courses at the same level.”*

When a new teacher is hired, he is given the syllabus and detailed information on how the particular course was taught previously, and he gets the freedom to update and adjust the content. The process of selecting new teachers for VSM includes asking pre-selected candidates to teach a sample

class. VSM seeks teachers who are trying to involve students, to encourage them to think and to participate.

*“There are many people, who are high quality experts in their field, but they became so used to delivering monotone lectures to large halls with 300 students, that they are simply not able to teach in the way that VSM is aiming for. We need people, who encourage student involvement and interaction in classroom. These are the teachers who would then be able to transfer their kind of teaching onto the Internet.”*

This method of hiring results in most VSM teachers being younger i.e. those without lengthy experience teaching authoritatively.

At the beginning of the first term the school administration holds a three-day orientation program for new teachers. They get all the administrative information, rules and regulations, academic standards, and are schooled on use of the online system, online tutoring, how to search for and punish plagiarism, how to motivate students, how to evaluate student performance, etc. The last day of orientation is also attended by all other teachers. This should help establish peer relationships and connections for future advice and help. Once the courses begin, teachers tend to rely mostly on peer support with any problems they encounter. There is a small two-person technical unit to maintain all computer systems and the network, and to provide technical support for teachers and students alike.

For almost every week of the course, the teacher asks the students a question based on course content, where students should provide a statement or explanation based on the course textbook as well as their own experience and views. They are then expected to react to the statement of at least one classmate. Students get weekly updates on the performance “points” they acquire during their course.

Formulating the weekly questions is up to the individual teacher. Beginners often seek peer help.

*“I am no expert on their topic, so I can tell them how to go about it and then they can do it themselves. I always tell them: Do not ask your students how to cook a goulash. Ask them what are the most important features of Hungarian cuisine.”*

At the beginning of the school year students get a single day introduction. Administrators do their best to provide as much necessary and useful information as possible. Students get a short lecture on how to use the Learning Management System (LMS), how to study in an online course, how to avoid plagiarism, an overview of rules and regulations, etc.

The aim is for the teacher to be visible on the course site at least every second day.

*“But the teacher does not need to answer to every question raised. Important is to lead students, not criticize them”*

### **Comments on the Interview**

I received very detailed answers and valuable explanations during the interview, on how things work within VSM. The atmosphere of the meeting was very positive and it was clear that these people believe in their work and in their institution. They believe they do things well and their approach is correct. This is a sharp contrast to all other interviews I conducted with people from public institutions, where general disillusionment seemed to prevail. People at VSM show the enthusiasm of those who believe they are doing their job in the best possible way, and consider it as much a mission as work.

If they have any problems or issues at VSM aside from tight budgets that hinder the smooth running of online courses, they did not let me know about them. This might be because with all three of them present, listening to each other's answers and with the cheerful atmosphere of the interview, they were not in a mood to discuss problems. Or it might be because they genuinely felt that beyond budget issues, there really are no substantial problems. In order to discover whether there were in fact any problems, I interviewed teachers individually when I returned for the follow-up interviews after monitoring the courses. With one of the administrators in the group interview also being a teacher, I had a chance to see if he would open up about issues he did not mention in the group. He actually mentioned some problems like insufficient teacher training and teacher overload.

During the individual interviews with teachers, I managed to spend more time discussing problems in general. (Results of the individual interviews with teachers are in Chapter 5.)

Some interviewees also remarked on Slovak authoritarian teaching traditions and the problems faced with teachers using authoritarian methods. They explained how rare it is to yet find a teacher who applies a constructivist approach in the face-to-face setting, and so they do not have problem to switch to online teaching. This is very much in line with similar information I found in the literature.

As well, even though VSM as an institution is genuinely trying to promote a constructivist approach in their online courses, the training provided to new teachers seems to be still rather technically oriented, with very little emphasis on pedagogy.

### **3.2 Comenius University**

This section contains background information on Comenius University, and the department that became my case study. I gathered information from websites of the university and the department, annual reports, and interviews. I interviewed the head of the department in July, 2010, and two Comenius University administrators in February, 2011.

When I was conducting introductory interviews in order to get background information in November, 2009, I still hoped that my second case study would be the large inter-university project and I interviewed the creators and administrators for the project. But having never been given access to the online part of that project, I switched my attention to the department at Comenius. Although I managed to interview the department's teachers and monitored the department's courses at the same time as at VSM, I was left to do background information on Comenius University and the department later.

### **General Information**

Employees of Comenius University often refer to it as the oldest, the largest and the best school in Slovakia. Certainly, with Comenius University being created in 1919, it is the oldest in the country, and their over 27,000 students in 2009 (Comenius University Annual Report, 2010), makes it the largest. Comenius University is a public, fully state-funded university. It consists of 13 faculties.

The adjective "the best" is sometimes used ironically in jest, but according to the annual quality rating published by the independent rating agency, ARRA (ARRA, 2010), in 2010, Comenius University came second out of 20 Slovak universities in average quality indicators in ranking. The faculty that the department belongs to ranks first among faculties in its field in all indicators – research, numbers of students interested in study, number of received grants and post-graduate studies (ARRA, 2010).

The department that became the focus of my case study has nine full time faculty and seven doctoral students. It services full-time students, and provides large scale professional education courses for full-time teachers at primary and secondary schools. The head of the department is known for his research as well as many international contacts, and the department itself is well known for pushing new methods of teaching.

### **Online Courses at Comenius University**

Comenius University's Annual Report for 2009, contains a section on E-Learning. Unfortunately, it contains only one paragraph, which reads (Comenius University Annual Report, 2010, p.92):

*"In 2009, University provided Learning Management System Moodle on its server for all teachers and students from all parts of University interested in E-learning....There are 72 courses at the University now that utilize Moodle."*

However, what is referred to here as courses "using Moodle", in many cases meant uploading textbooks and additional study materials for a regular weekly face-to-face course. (I spoke to department heads and numerous teachers at Comenius University, and asked them to show or explain precisely how they use the Moodle system.)

### **Introduction to Interviews**

I interviewed the head of the department on July 12, 2010, at his home on the outskirts of Bratislava. I was in Slovakia for only two weeks at the time and he spent most of that time at two different conferences in two different corners of Europe. He was not planning to go to the university between his trips and my visiting his home to get the interview turned out to be the only option. I have worked with him on a couple of projects in 1999-2003, and

we became friends. The atmosphere was very relaxed and I let him talk more widely not just about problems at his department, but also about general problems in education in Slovakia.

On November 24 and 25, 2009, I interviewed two of the department's teachers in their offices at the university. I conducted these interviews at a time when I believed that I would focus on the inter-university project as my case study, and talked to these teachers mostly about courses they taught for that project. But we also talked about their pedagogic beliefs and teaching methods, as well as courses they were teaching for the department's students.

I conducted the interviews with two administrators of Comenius, on February 14, 2011, in their offices at the university. I knew one of them personally (I used to be a childhood friend with his children), and both interviews took a very informal tone. There were a few things revealed that I promised not to use in my dissertation. Part of the discussion here was also focused on general problems in Slovak higher education. I took written notes and recorded all the interviews with written consent from participants.

### **Information from Interview with Administrators**

Comenius University has been talking about online learning policy and strategy since 1999. However, all discussions and plans have always been focused mainly on choosing and installing a learning management system (LMS), and providing technical support. In 2004, the university chose an LMS, eDoceo, created by a Czech computer company. However, the company failed to make necessary adjustments to the system, provided software and all services late, and due to persistent technical problems the system never got to be used by teachers on a wider scale. In the meantime, faculties and departments of Comenius University started to install and use their own Moodle servers. After all the trouble with the unreliable provider,



the university decided to adopt Moodle on larger scale. In 2010, the university-wide Moodle server was installed and faculties and departments have been slowly migrating their existing courses there.

During the last few years there has been talk about a strategy for online learning development within the university. Among other things, financial incentives for teachers to develop courses were mentioned, as well as a possibility of organizing a competition and give rewards and recognition to those who created good online courses.

However, none of these proposals became reality:

*“There has always been some more pressing problem that needed immediate resources and attention. Somehow there has never been enough time to pay attention to developing a strategy for elearning. At least, there are no obstacles for teachers who want to develop and teach online courses.”*

As it is now, Comenius University has one person who provides training for groups of teachers from different faculties interested in online learning. These are face-to-face sessions either one full day or three full days. The single day training contains a general introduction into online learning and basics of Moodle usage. The three day training increases time spent on Moodle usage, including basic knowledge of hypertext language, which would enable users to make their Moodle sites looking better.

Comenius University administrators have some ideas on how grants and rewards could boost online course development within the university, and would also like to increase the number of trainers, and add an expert on methodology to their team, to be able to expand training beyond technical skills. A new rector was elected towards the end of 2010, and administrators hope that the new leadership will place a higher priority on online learning.

## **Information from Interviews with the Head of the Department at Comenius and its Teachers**

The department had been trying to develop educational software and to start teaching with a “different” approach, already prior to 1989.

*“Right after 1989 we invited in the big experts in the field and got invitations to conferences and workshops and started to travel. That shifted us into trying constructivist approach straight away. But we are kind of lonely in this effort.”*

There other departments at other universities in Slovakia in the same field as the department at Comenius. These are the people the department’s teachers meet at workshops and local conferences, and partner with for grants from European Union funds. But their relationships are not ideal.

*“They all run according the motto: It has always been done this way, so we will continue doing it this way. Why change? But I do not think that is right. We should always keep asking what our efforts bring we need to constantly evaluate our work and to try to improve it.”*

The department has been running the Learning Management System, Moodle, and experimenting with online courses for about 8 years. It was one of the teachers who took initiative to install Moodle at the department all those years ago. He had been maintaining it and providing technical support to other teachers and students until the system’s migration onto the university-wide Moodle server a few months ago. It was voluntary work, but students and teachers do not need much technical support for Moodle.

*“Our teachers are computer people, our students are good in informatics. They all know how to resolve technical problems.”*

Online learning at the department was started by one of the department teachers, who was the first one to step beyond using Moodle for posting support materials and tried to offer his course in a fully online format, including activities and discussions. This particular teacher got the idea from being involved as technical support in an international project that developed an online course. A few more teachers got inspired as well, and started to experiment. A number of them used these experiments for their dissertation projects.

All online courses at the department are being developed and taught as personal initiatives of teachers. Besides technical help they get no other training or support.

*“We have some excellent people at the department. They learn new things from literature and Internet, they do not need additional training. But they need at least support in form of time. They are under such time pressure to teach their face to face classes and deal with all administration, that they do not have any time to do new things.”*

Students would also need their teachers to be less busy. The department has a tradition of having students in small groups with an emphasis on research and individual attention.

*“With teachers overwhelmed by administration, students do not get the attention they need.”*

The two teachers most active in using discussions and trying to involve students into activities and participation in online courses were both doing it as part of their dissertation research.

They used discussion forums as an additional voluntary activity. Every week they would ask a question and let students to try to figure out an answer together. However, as all these courses were blended courses with

three or more face-to-face meetings over the semester, and with most of the students living in the same hostel building, most of these informal student-to-student discussions were naturally conducted off-line.

*“I have a feeling they come into the discussion and present to me only problems that they were not able to resolve between themselves. No wonder I can not get them to participate in discussion on the issue after that. They already discussed it over a beer last night.”*

### **Interviewees Opinions on General Problems in Education in Slovakia**

Constructivism and collaboration are popular terms in Slovakia right now. Everybody talks about them, but very few teachers actually attempt some change. They lack motivation, time and energy. In reality, collaboration is being suppressed in students starting from kindergarten. Children are taught that working with a peer is cheating.

The interesting thing is that despite everything that their culture has impressed upon them, many Slovak students are perfectly capable of adjusting to active and collaborative learning:

*“I have a group of four very lively and active students in one of my classes. All I need to do is give them tasks and problems to resolve and let them figure it out and work whichever way they want and they accomplish unbelievable things. Colleagues from other departments who teach them too complain that these particular students are not disciplined enough and disrupt the class.”*

The academic discourse very often focuses on the quality of online learning:

*“We do not need to talk about online learning quality. We need to talk about quality of teaching and learning in general. If we do not know how to teach well, we can not make good online courses either.”*

Education in general is not highly respected in Slovak society. The communist regimes used to promote the working class, and respect towards educated people is still not prevalent.

*“If a TV star would admit in a live show that she never liked and never tried to learn her math, the audience will give her a roaring applause.”*

Higher education in Slovakia is severely under-funded, and

*“...teachers have no motivation at all”.*

### **Comments on the Interviews**

Frustration about the situation was obvious during the interviews. All Comenius University interviewees felt very similar kinds of frustration. I interviewed some exceptionally enthusiastic people - teachers and administrators alike, who are genuinely trying to make changes and apply innovation, even though they are overworked and underpaid. And they have very little funding, time and recognition for their work. These teachers and administrators do not feel like criticizing any of the other faculty members for not teaching online, or for not putting effort to make their online courses interactive. As the head of department put it:

*“They have no motivation, no time. What do you expect?”*

On the other hand, he insists that even though the situation is bad, there is a need to keep trying.

*“Yes, we really have great excuses for not trying to improve anything. So we complain and cry and then we will just have to get up and keep going...”*

### **3.3 Summary and Conclusions**

In this chapter, I introduced background information on both institutions that became a part of my research.

VSM is a small private college offering mainly business degrees in partnership with the City University of Seattle. All courses in VSM's part time programs are also offered online, following guidelines adopted from the City University of Seattle's online program. These very detailed and directive guidelines for teachers contain specifications on course design and facilitation of online courses, requiring teachers to include at least one weekly online group-based activity. According to administrators, for all of their courses, these weekly activities are asynchronous discussions where the teacher posts a question and each student is requested to post a substantial answer and react to posts of at least two classmates.

New teachers get a three day orientation training focused mostly on technical aspects of managing an online course. Beyond this, they rely heavily on peer support.

Comenius University is the oldest and largest (with over 27,000 students) university in Slovakia. The university does not have a specific policy for online learning development and online courses are being developed based on local initiatives in different faculties and departments. The department that became a focus of my case study has been experimenting with online courses for over 8 years.

The two most active teachers at the department have been experimenting with discussion forums as a means for communication and collaboration. They also use weekly discussions in a similar way as teachers at VSM, but participation in their online discussions is strictly voluntary.

At VSM, teachers are required to create and teach online courses following a strict set of rules, at Comenius University all online courses are created and taught as a voluntary initiative of teachers. However, training for teachers at both institutions is focused mainly on technical aspects of online learning, and teachers and administrators at both places complain about a lack of funding, poor accreditation and quality measurement rules of Slovak education system, and strong authoritarian teaching traditions in Slovakia.

The following chapter presents results and analysis of discussions in online courses, of student questionnaires, as well as of interviews with both teachers and students, at both institutions.

## **Chapter 4 Results and Analysis**

This part provides data collected from courses, teachers and students at VSM and Comenius University, as well as analysis conducted during the process.

Chronologically speaking, I first monitored three courses in spring 2010, conducted transcript analysis, and collected student questionnaires, then went on to interview teachers showing them these preliminary results. Following that, I monitored another three courses in fall 2010, collected questionnaires and afterwards interviewed a few students to get better input on student views. It would make sense to present data here chronologically, but I decided to pull all transcript analysis data into one section together. To get a full picture, I believe it is necessary to see them in one table together instead of spread through different sections. I present the rest of the data (results from questionnaires and interviews) chronologically, so that it is still possible to follow my process of adjusting interviews and questionnaires according to analysis on previous data.

Section 4.1 then, details the findings of transcript analyses of course discussions from both VSM and Comenius University, from both semesters I observed. Section 4.2 chronologically presents all other data gathered from VSM, i.e. information first from questionnaires from the spring semester, then from interviews with teachers and student questionnaires from the fall semester, and finally the interviews with students. Section 4.3 chronologically presents the rest of the data from Comenius University. Section 4.4 explores two key issues that arose from the course discussion findings.

### **4.1 Transcript Analysis**



This section provides results gained from transcript analyses of one discussion thread from each of the four courses at VSM, and two at Comenius University, using the Community of Inquiry model.

## Background Analysis of Courses

In the spring term of 2010, there were two courses at VSM – one taught by Peter and one by Henrich, and one course at the department at Comenius University, taught by Robert. In the fall term of 2010, I again monitored and analyzed one course taught by each of these instructors. Table 4.1 summarizes the basic characteristics of each of the monitored courses.

Table 4.1 Summary of Characteristics of Courses

Course	Students/course description	Characteristics of discussions	Thread selected for analysis
Peter 1 (the course taught by Peter at VSM in spring 2010)	Fully online course, 26 students, mostly adults with full time jobs	10 compulsory weekly discussions in the course, prompted by questions posted by Peter. Most of the questions relating to specific issues were explained in the textbook used within the course. Hence, students had a tendency to base and word their answers exclusively on the textbook, and were found to be re-wording the same answer throughout the discussion thread. Peter also asked them to provide some examples for issues discussed, which proved to be the more interesting parts of the discussions.	43 message thread from the second week of the course.
Peter 2 (the course taught by Peter at VSM in fall 2010)	Fully online course, 9 students, mostly working adults, for most of them this was the last course to the degree	There were 10 weekly discussions with Peter posting the initial questions. The number of messages in these discussion threads varied from 22 to 43.  All discussion questions again referred to particular chapters of the textbook used with the course. Peter asked students to explain problems in their own words, and provide examples.	43 message thread from the third week of the course
Henrich 1 (course taught by Henrich at VSM in spring 2010)	Fully online course, 12 students, mostly working adults	8 weekly discussions with Henrich posting initial questions. Henrich occasionally got creative with his discussion questions and not all of his questions referred directly to chapters in course textbooks	52 message thread from the fourth week of the course
Henrich 2 (course taught by Henrich at VSM in fall 2010)	Fully online course, 19 students, mostly working adults	8 weekly discussions with Henrich posting initial questions.	56 message thread from the eighth week of the course
Robert 1 (course taught by Robert at Comenius University in spring 2010)	Blended course with few face-to-face meetings offered to secondary school teachers with 19 participants	10 voluntary weekly discussions. Robert would usually post a topic to discuss, and not a question to answer. Only a few students participated	23 message thread from the third week of the course.
Robert 2 (course taught by Robert at Comenius University in fall 2010)	Blended course with a few face-to-face meetings with 7 full time university students	10 voluntary weekly discussions. This time Robert only opened forums without posting topics and let students use them as they saw fit	16 message thread in the fifth week of the course.

When choosing a thread to analyze in each course, after reading all discussions, I tried to select a weekly thread that would have the most thoughtful discussion and with the best chances of finding indicators of critical thinking. With this method of selection my sample is not typical or representative for Slovakia, or generally for all courses at VSM. I was aiming for better than typical examples to analyze in order to discover what might work best.

In the Peter 1 course, the selected thread appeared to have a more meaningful discussion than most. In the Peter 2 course, all discussion threads seemed very similar in cognitive and social involvement of students, so I choose one randomly. In the Henrich 1 course, all threads seemed very similar, with the one chosen being a bit longer, and more animated and involved than the others. The thread I chose from Henrich 2 was definitely exceptional. Most of the discussion questions asked about issues explained in the course content for the given week, where students were expected to post their own explanation of problems and provide examples from their own experience. This was the case for all weekly discussions except the final one in week 8, where Henrich used a problem with a complicated database structure mentioned in previous discussions, and asked students to come up with solutions independently. In this way, Henrich prompted students to actually resolve a problem as opposed to rephrase ideas from textbooks.

In Robert's courses at Comenius University, choosing threads to analyze was rather easy because in most weeks students simply did not get engaged in discussion. In both courses Robert 1 and Robert 2, the selected threads were the only threads longer than 4 messages in those courses where students got engaged in meaningful discussion connected to the content.

### **Cognitive, Social and Teaching Presence**

The Community of Inquiry model that I used for transcript analysis looks into three different aspects of online discussion. The following table provides a quick summary of definitions and indicators of cognitive, social and teaching presence.

Table 4.2 Definitions, Indicators and Analysis in the Community of Inquiry Model

Community of Inquiry Model	Definition	Indicators	Data Collection and Analysis
<b>Cognitive presence</b>	The extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication.	Four stage process: (1) triggering (posing the problem), (2) exploration (search for information), (3) integration (construction of possible solution), and (4) resolution (critical assessment of solution)	The last two stages – integration and resolution, signal critical thinking. Garrison et al. used the whole message as a unit of analysis, placing each message into one of the four categories and ending up with a percentage of messages representing each category.
<b>Social presence</b>	The ability of learners to project themselves socially and emotionally in a community of inquiry.	Three categories of indicators: affective responses, interactive responses and cohesive responses.	It is not possible to use whole messages as the unit of analysis because very often there are numerous indicators of social presence within one message. Rourke, et al, (1999), suggested to count the number of indicators shown in a discussion thread and divide it by the number of words in the whole thread. Then to multiply the social presence density figure by 1000 and end up with a number showing unit of incidents per 1000 words.
<b>Teaching presence</b>	Teacher's contributions to interaction	Three categories: design and organization, facilitating discourse, and direct instruction	The whole message is used as a coding unit. Since one message might show signs of two or three different categories, each message posted by the instructor is coded as exhibiting or not exhibiting one or more indicator of each of the three categories of teaching presence

Based on information from Rourke et al (1999), Garrison et al (2000), Anderson et al (2001)

## Results for Cognitive, Social and Teaching Presence

In order to shed more light on communication in a discussion thread, and the teacher's role in it, besides determining cognitive, social and teaching presence for all messages in a thread as a whole, as the original Community of Inquiry model suggests, I decided also to separately determine the social presence of the teacher for each thread by counting social presence indicators in the posts made by the teacher (as is suggested in later studies (Shea and Bidjerano, 2009; Shea et al, 2010)).

All results from transcript analysis are presented in Table 4.3

Table 4.3: Transcript Analysis Results from All Courses

Course	CP Trigger	CP Exploration	CP Integration	CP Resolution	SP Students	SP Teacher	TP Design	TP Facilitation	TP Direct Instruction
Henrich 1	3.40%	69.85%	26.75%	0%	18.4	23.9	20%	80%	100%
Henrich 2	3.60%	28.60%	60.70%	7.10%	29.8	23.1	33.30%	100%	100%
Peter 1	3.40%	61.80%	29.10%	2.30%	9.5	22.5	20%	60%	100%
Peter 2	6.20%	59.40%	34.40%	0%	14.3	42.1	28.60%	42.90%	85.80%
Robert 1	15.20%	60.90%	23.90%	0%	21.1	41.1	0%	0%	100%
Robert 2	45.50%	18.20%	9%	0%	22.4	17	33.30%	0%	100%

**NB:**

Indicators:

- CP – Trigger – cognitive presence indicator for Triggering phase
- CP – Exploration – cognitive presence indicator for Exploration phase
- CP – Integration – cognitive presence indicator for Integration phase
- CP – Resolutions – cognitive presence indicator for Resolution phase
- SP – Students – indicator of aggregate social presence of discussion thread as a whole (number of indicators per 1000 words)
- SP - Teacher – indicator of aggregate social presence of the teacher (number of indicators per 1000 words)
- TP – Design – teaching presence indicator for Design and Organization category
- TP – Facilitation - teaching presence indicator for Facilitating Discourse category
- TP – Direct Instruction – teaching presence indicator for Direct Instruction category

### **Cognitive, Social and Teaching Presence in Table 4.3**

Looking at results for cognitive presence - most of the monitored courses (all except for Henrich 2) had very few or no messages reaching the resolution stage, with the main distribution of messages falling into the exploration and integration categories. Comparing it to results from different studies around the world (see Table 2.5) this seems to be a typical distribution.

The shift towards Integration and Resolution in the thread analyzed for the Henrich 2 course is most probably caused by Henrich's unique formulation of the question. This was the only discussion question in all the VSM courses I observed that asked students not only to find answers from the textbook and provide examples, but actually to work on a problem that was not mentioned in the textbook and to come up with solutions. This was enough to get students to analyze each other's opinions and work towards solutions within the discussion forum.

Aggregate social presence is the number of social presence indicators per 1000 words of discussion. Aggregate social presence results by Rourke et al (1999) were 22.8 and 33.5 and results from other articles also ranged from 22 to 35 (Rogers and Lea, 2005; Nippard and Murphy, 2007). This is a useful benchmark for the discussion of my findings.

With the exception of the thread in Henrich 2, indicators of social presence in my results seem to be slightly lower than the range showed in literature. Social presence in Henrich 2 is higher than it is in the other courses, but it is not exceptionally high. Henrich put some conscious effort into creating a social environment for the discussion, as is shown in higher indicators of his social presence and his emphasis on facilitation. Also, this was the last discussion for the semester and students felt more relaxed with each other.

The unit of analysis for teaching presence is a whole message posted by the instructor. However, a message might show signs of more than one

category. Results for the teaching presence analysis presented by Anderson, et al. (2001), were 22.3% in the instructional design category, 43.2% in facilitating discourse, and 77% in direct instruction for one thread they analyzed, and 37.%, 75% and 87.5% respectively, in their second thread.

My results - five of the six analyzed threads having 100% messages in the direct instruction category, suggest a higher tendency by Slovak online teachers towards direct instruction, which would be in line with stronger behaviourist Slovak teaching traditions. Robert stuck almost exclusively with direct instruction in both of his courses. More interesting is Peter's effort to ease the emphasis on direct instruction in the fall and Henrich's greater emphasis on facilitation.

### **Connections between Cognitive, Social and Teaching Presence in Table 4.3**

There are a number of research studies that suggest a strong connection between social and cognitive presence (Rovai, 2002; Kanuka et al.; 2007, Shea et al, 2010). On the other hand, some recent research (Annand, 2011) suggests that Social Presence does not have a significant influence on Cognitive Presence at all. Looking back at the Table 4.3, I do not see a significant linear connection between social and cognitive presence in my results. There are other clear factors such as the structure of discussion and students' lack of time and experience that influence both social and cognitive presence. Also, in this case I am comparing different courses on different subjects being taught by different teachers at different institutions, so there are many more factors that influence the results.

However, in all threads, a connection between the Facilitation indicator of teaching presence and a shift towards higher occurrences in critical thinking categories (Integration and Resolution) of cognitive presence, can be seen. But even here, other contributing factors such as student

background, course design, compulsory versus. voluntary participation in discussions, formulation of discussion questions, etc., are involved as well.

Undoubtedly, instructor social presence is one of the key factors influencing student social presence, as well as student cognitive presence. However, other important factors, such as a connection between teacher and student social presence, might be evident in Peter's case – with increased social effort on his part in the fall semester, an increase in student social presence was also seen.

Henrich's social presence did not change much between the two courses he taught, but his students' social presence was much higher due to other factors. In my interpretation, the key factors were:

- The formulation of the question at the beginning of the discussion thread. He guided students deeper into the topic, which they enjoyed and became more involved – both cognitively and socially - than in other topics.
- Being the final week of course discussions, students were more relaxed and comfortable with each other.

Henrich's teaching presence also hasn't changed much between the two courses, even though it is clear that formulation of his question for the Henrich 2 discussion thread was one of the key factors influencing cognitive presence. This confirms findings of Morgan (2011), who pointed out that the indicators for teaching presence don't reflect reasons and decision making processes of the teacher.

Robert's social presence was higher in the fall semester, but his students' social presence did not increase. This was mainly because in this course he did not try to design or facilitate discussions. He only entered a thread to answer questions, acting more relaxed and social than when trying to direct discussions in the spring course. Students seemed to perceive the

discussions the same way – mostly as a place to post questions and exchange pleasantries, not a space to analyze issues.

## **Two Directions for Analysis**

Further data analysis and collection came out of the discussion transcript analysis for the spring semester, and were confirmed by data collected in the fall:

1. Slightly lower indicators for student's social presence.

Analysis has not shown a direct link between students social and cognitive presence, and even though there might be some connection between student and teacher social presence, there are obviously other factors at play. However, overall results for social presence are at the lower end of the range known from literature. When interviewing teachers and students, I mentioned the issue and tried to get an overview of these factors.

2. Emphasis of instructors on Direct Instruction.

Instructors' efforts varied in the courses I monitored at the levels of design and organization, and in facilitating discourse, though almost every one of the instructors' posts carried an element of direct instruction, either for one student or the entire group.

In the interviews with teachers and students that I conducted later, I tried to get their perspective on whether this emphasis can be connected with the prevalent authoritarian tradition in Slovak higher education.



## **4.2 Questionnaire and Interview Results from VSM**

After presenting discussion transcript analysis results from all courses together, so that connections and similarities between different courses could be seen, I am now moving on to presenting results from the questionnaires and interviews in chronological order, so that developments in the interviews and questionnaires as influenced by partial results could be followed.

This section contains results from student questionnaires collected during the spring and fall semesters in 2010, from students in monitored courses at VSM, and from interviews with instructors conducted in summer 2010, and with a few students conducted in February 2011, in an effort to clarify areas where I felt lack of student input.

### **Questionnaire Results from Spring 2010**

Course instructor, Peter, posted the questionnaire on the course site with an explanation that it was my dissertation research and if students were willing to participate, they should email questionnaires directly to me. It was very clear that this questionnaire was not a part of the course and participation was strictly voluntary. I received six completed questionnaires for Peter 1, out of 26 students. When Henrich posted the questionnaire on the Henrich 1 course site, he added a personal note that while the questionnaire had nothing to do with grading, he personally owed me a favor and encouraged students to participate and help him to return the favor. This resulted in bringing in 7 questionnaires from the class of 12 students. A personal note like this helped increase the number of questionnaires returned, however it could also make students think that if their teacher has personal connection with the researcher, there is a chance that the teacher will be able to see

their questionnaire responses. On the other hand, it could also be perceived as nothing more than Henrich's endorsement of my credibility.

Students were asked to mark their satisfaction with course discussions on a scale from 1 to 5 (1 being the highest and 5 the lowest mark). Average marks received for Peter 1 was 2.33. None of the students gave the middle score, 3. They either rather liked the discussions (four students gave marks of 1 or 2), or did not like them very much (two students used mark 4).

The average mark for Henrich 1 discussions was 2.14 (again, nobody used the middle score, 3). In open ended questions, students generally evaluated discussions positively:

As a

*"...great tool to learn all the news in the field"*

And as an opportunity to

*"...understand how others think".*

However, three of the students stated that they would welcome

*"...more intense participation from the lecturer"*

And one explained it as a

*"...need to know which opinions in discussion are right and which are wrong".*

In Peter 1, as positive features of discussions, students listed opportunities to think deeper about issues and figure out details, to share experiences with classmates, to analyze real life situations and to be able to express ideas in brief non-formal writing.

Students in Henrich 1 saw advantages in the opportunity to learn from classmates, analyze the course content deeper, see the practical applications of the course content and the fact that compulsory weekly discussions kept them working continuously through the semester, hence they did not need to work so hard at the end to prepare for the exam.

The Peter 1 students were quite united on negative features and problems as they perceived them. Five out of seven expressed a need for greater instructor involvement in their weekly discussions. They said they would like to know the instructor's opinions on a number of issues discussed and imagined the instructor could also help guide discussions better to keep them from becoming stale – i.e. students repeating the same things over and over. Dullness of discussions was the second most mentioned problem, pointed out by three students. As one of them put it:

*“I did not like that some students gave exactly the same answers to the questions. They saw that someone had already discussed the question and they wrote the same anyway.”*

Other problems mentioned in the Peter 1 questionnaires were miscommunication and misunderstandings, and also a need to depend on peers during the group assignments.

None of the students in Henrich 1 complained about repetition of comments and answers within discussions – probably because in this course, Henrich stepped in early in the discussion to tell them that they are not supposed to repeat things already said. These students however, did complain about plagiarism issues and they also wished for greater participation by the lecturer. They noted their lack of time to participate in discussions more actively and complained about technical aspects of the discussion forum, such as that all posts were shown in a chronological list, making it impossible to easily recognize which post a reply was responding to.

In summary, students were generally satisfied with their online course discussions, but consistently called for more involvement and participation from their teachers.

### **Interviews with Instructors - Peter and Henrich**

The interviews were conducted in July, 2010, after I monitored and analyzed discussions and collected questionnaires in Peter 1 and Henrich 1. This was when I was able to show Peter and Henrich my partial results and asked for their opinions.

Peter had been teaching online for only a couple of years and was not highly confident in his online teaching skills. He tended to see most of the negative comments from the questionnaires and the discussion analysis as his own failures and was looking for a way to make changes and improvements in his teaching. He saw student comments about his low involvement in discussions as justified and blamed it on his own lack of time and preparation. He also declared that the lower social presence in his Spring course was partially due to his lack of contributions. He explained that he was very busy this term with other things and he was aware that he had not put much effort into creating a more social environment for students.

On the other hand, Peter admitted that when he put greater time and effort into getting students to socialize online in some courses he taught in previous years, his efforts were not very successful. However, he still insisted that low social presence is not specific to Slovak culture, but rather is a result of poor teaching, and of the unwillingness of students to spend more time than necessary on their online course work. This phenomenon has been documented in literature (for instance Naughton et al., 2011, who conducted large student survey in New Zealand), and I do not think it is specific for Slovakia, or connected to its authoritarian traditions.

Henrich has been teaching online for over 10 years. He has taught at universities in the USA and Western Europe, before coming to VSM. He feels confident in his teaching methods and is able to compare Slovak online students with students abroad.

He claimed that his low involvement in discussions is intentional.

*“There are always few students in the group who already have knowledge and experience on the subject. I want to give them space to present, compare and analyze it. Why should I always play the smart one?”*

Henrich would enter a discussion to facilitate only if it strayed off the subject, or students were saying things that are too simplified or untrue, so that they were encouraged to look at the problem from different angle. He believes that students demanding “correct answers” from the instructor are a manifestation of the Slovak authoritarian-style cultural heritage.

*“Students contradict and analyze comments from their classmates in discussion. But whatever teacher says in our culture is taken as a prayer. No polemics, nobody dares to contradict. I do not want to be a preacher.”*

He pointed out how often it happens in college classrooms in Slovakia that a teacher would be teaching something that is not entirely true, and while better more accurate information is known to be available, students even with access to the information would still just memorize and repeat at exam time whatever the teacher taught them. Only very rarely would students raise issues with the teacher in the class.

Henrich claims he could note the difference between students who have already spent a few years at VSM and learned that it is possible to contradict their teacher and analyze issues with them, and students who come fresh from high schools or other colleges in Slovakia who just do not

dare to disagree with anything. He admits he does not have any proof for his cultural teacher/preacher theory, but he firmly believes this to be true.

In reaction to students who complained in questionnaires about late assignments ratings from instructors, Henrich explained about 'instructor overload' at VSM. In order to keep the students VSM can charge only 210 EUR per course per student. If courses had less than 10 students it would be unprofitable. Therefore the number of student in a course fluctuates between 10 and 30. A full time teacher needs to run on average 3 courses per term. This might result in an overwhelming number of assignments to read and grade.

Henrich also realizes that the training he got when teaching online at foreign universities was considerably more extensive than what VSM provides to new teachers. But he acknowledges that having to keep their tuition fees so low, they just cannot afford to provide more extensive training:

*"Would you be willing to train our teachers for free? We would hire you in an instant. We just cannot afford to pay for it."*

On the topic of social presence and its perception among students, Henrich said:

*"I usually dedicate the first week of discussion to establishing social contact. But I had a student once complaining already, that we have lost the whole week without learning something useful..."*

### **Questionnaire Results from Fall 2010**

Similar to the spring courses, Peter and Henrich posted my questionnaires on their course websites and asked students to complete and email them

directly to me. Unfortunately, in the fall semester, I received very few questionnaires from VSM - only two from students in Peter 2, and just one from Henrich 2. This was probably caused by the fact that questionnaires were posted on the course site slightly later than in the previous term when students were busier with their final assignments and no longer checking the course site so thoroughly. This low response rate was one of the reasons I decided to conduct additional interviews with students at the end of the project, in an effort to increase the student contribution.

For this second round using questionnaires, I added two additional questions in order to get a better understanding of student perception of peer-to-peer communication in discussions:

- What is your impression on communication with your peers in online discussions (content communication and social communication)?
- How did your teacher influence your communication with peers?

All three VSM students gave discussions the highest mark 1 – so the average mark from these questionnaires was 1.0. They all consider discussions very useful, because

*“...they help to understand theoretical problems”*

And they enable students to get answers to their questions. One of the answers nicely expressed the key importance of the discussion:

*“Students can put in their own views and understandings and defend them and that is how people learn.”*

This answer came from student in Henrich’s class – a person who could be called an experienced online student – this course was his seventh term at VSM.

As positive features, one student listed opportunities to express opinions, and all three emphasized their satisfaction with feedback from classmates and particularly from the instructor.

One negative feature mentioned again was a problem with cheating. Students said that some of the comments from classmates were either somebody else's opinions presented as their own, or comments that were not at the "college level" at all.

Students' overall evaluation of discussions was very positive, they were all convinced that having opportunity to explain concepts and ideas to each other this way helped them to think and understand better.

On their instructor's influence on communication they all expressed satisfaction with his input – saying that the instructor was directing discussion and explaining more complicated concepts. The student in Henrich's class, however also added:

*"I would prefer the teacher to put in more comments than he did".*

### **Interview with VSM students**

I interviewed two VSM students in February 2011. We went through the questionnaire together and I asked them to elaborate on their opinions. It was again a semi-structured interview.

These two students have both been at VSM for a few years and went through a number of online courses. Both Peter and Henrich have been their teachers. VSM online courses were the only online courses they have ever experienced or heard about. They were very enthusiastic about VSM's approach to part-time study. They compared it to part-time systems offering intensive face-to-face weekends, as most Slovak public universities offer, and are convinced that this system is better. They have flexibility (one of



them spent some time in a hospital last year and did not need to interrupt his studies), and they felt the courses have practical applications.

These students also appreciate that the VSM online course system makes them work on discussions and assignments throughout the semester (as opposed to the traditional system of standard lectures and one exam at the end of the term), and they believe that presenting their work to classmates and receiving feedback might be stressful, but is a very useful experience.

They did not see any problems with shyness or the social aspect of online communication. They both admitted to being a bit “hesitant” during their first course, but they claimed to get used to it pretty quickly:

*“It is not Facebook, it is a course, so I had to get used to it, but after first few weekly discussion in my first course, it was fine...”*

In their opinion, Henrich is a very good online teacher, because he

*“...explains things so that we can come up with answers ourselves”*

...that he answers emails fast, and even though he travels more than most other teachers at VSM, he is more accessible because he is always available for online consultations.

When asked, whether they enjoyed socializing online with their classmates, one of them said:

*“Yes, it was fun. But I have a full time job and friends and hobbies and nobody can expect me to spent there time chatting when it is not needed.”*

## **Summary and Comments on VSM**

VSM stands out as an exception in the Slovak educational environment. It is the only academic online program in Slovakia on such a scale (having a few hundred students), that successfully engages students that are not physically present at the school.

Some of the teachers and administrators at VSM acknowledge that the training provided to new teachers is insufficient, but they claim they are not able to improve the situation at this time due to financial constraints. They seem to believe that the little funding they can afford to spend on training new teachers needs to focus primarily on technical training, while teachers will get to figuring out the rest on the go, using peer support.

VSM teachers seem to believe, concerning social engagement and interaction online, that Slovak students do not react differently than students abroad. Students also do not seem to have issues with shyness and inability to express themselves in a discussion.

Most VSM students are working adults with full time jobs and other commitments. Both teachers and students repeatedly raise the issue of time pressure on students, hence their tendency to only do tasks that are required to complete the course, and not to spend time on anything that is not going to be part of their course assessment.

More interesting, though, are the repeated calls from students for their teachers to be more involved in discussions in order to tell them which answers are “right”. There is Henrich’s conviction that this is a clear sign of students being raised by mostly authoritarian teachers who tell them how things are without teaching them to think for themselves. Using Henrich’s term, I recognize this as a “teacher/preacher” phenomenon.

In the next section, I focus on interviews and questionnaires from Comenius University.

## **4.3 Questionnaire and Interview Results from Comenius University**

This section contains results from questionnaires collected during the spring and fall semesters in 2010, from students in monitored courses at Comenius University, as well as from interviews conducted in summer 2010 with the instructor, and an interview with one of the students conducted in February 2011 in an effort to clarify issues I felt I did not have enough student input on.

### **Questionnaire Results from Spring 2010**

Course instructor, Robert, placed my questionnaire on the course website making it clear that it is not a part of the course, and students were supposed to download, complete and send it directly to me. Robert also added a personal note, having just finished his dissertation, that he feels strongly about trying to help a fellow student, encouraging the students to fill the questionnaire. I received 6 completed questionnaires from a class of 18 students.

In this course, discussions were strictly voluntary. Robert posted a question every week, students could answer it, or react to answers of their classmates, but participation had no influence on their course assessment. Very few students actually participated in discussion. For most weeks, discussion consisted of 2-4 messages. There was only one week in which students actually got involved and created a thread of 23 messages.

On the whole, the students did not seem very impressed by discussions. The average mark given by students for discussion was 3.2 out of 5, where 1 was the highest mark, and 5 the lowest. The students appreciated the fact that they could learn the points of view of their classmates and look at

problems from different angles, but they also complained that topics of discussion were often not relevant to the course content and even more often

*“...not interesting enough to participate”.*

As positive features, students listed the opportunity for flexibility in time and location to participate, having more time to think about answers, and the practical applications of the content provided in some of the discussions.

However, they were more detailed and specific about negative features and problems. Three of them complained about fellow students participating in discussions just to be able to say they participated, without actually having contributed anything on the topic. Two of the students commented that participation in discussions was very low because it was not compulsory, that

*“...busy students with lack of time will not bother with things that are not compulsory”.*

One student pointed out that the topics of discussions were not very interesting and another one thought the discussions were not promoted enough during the course by the instructor. He...

*“...just forgot that an option like this was there.”*

### **Interview with Instructor - Robert**

Robert became interested in online learning about 10 years ago. He was fascinated by the possibilities, started playing with Moodle, and a few years later made online learning the topic of his dissertation research.

The shift to online teaching is an initiative of each individual teacher at the Department. They receive no training or financial or non-financial rewards or support in adapting their courses to the online form. Department had its own Moodle server that was run voluntarily by one of the teachers. Its courses were merged into the central Comenius University Moodle server in September, 2010.

Having his background with Moodle, Robert would help provide technical advice where requested, but as he is not paid for this, most teachers at the Department try to figure out the system on their own. There is no motivation or guidelines for teachers on how to teach online. Most teachers use Moodle to provide students with more resources, texts and links to supplement their face-to-face courses, some use it to collect assignments and feedback from students. Robert started to include online discussions into his courses about three years ago, as an experiment and part of research for his dissertation project.

Similar to his peers at VSM, Robert is also convinced that the low social presence indicator in his course is not a result of any cultural tendency, but a reflection on the effort (or lack thereof) on his part in facilitating discussions.

On his own involvement in discussions, he said:

*“When students do not seem to be coming up with it, I step in and give them the right answer.”*

When I asked what happens in a situation when there might be more than one right answer to a question, he said:

*“Then I provide all the right answers.”*

### **Questionnaire Results from Fall 2010**

In the Fall semester, Robert forgot to place my questionnaire on the course website before the end of the course. To remedy the situation, he uploaded it to the website during the time students were preparing themselves for the exam in January, presenting it as an assignment in Moodle. He promised each student who submitted a completed questionnaire an additional point on their exam result. This strategy worked out well, of course, and I received six completed questionnaires from the class of nine students.

As for overall impressions, the students were generally happy with the discussions. The average mark came to 1.83. Five of the six students gave marks of 1 or 2, and expressed the opinion that even though online discussion might not have been used to its full potential in this course, they consider it very useful. For instance:

*“As for this course, we discussed most issues in person, because we could and did not bother to do it online. But otherwise I think online discussions could be very useful and important for understanding the concepts and resolving problems.”*

One student, referring to experience from only this course, did not see too much point in discussions:

*“Maybe it is because I am not used to discussions – I was waiting for an answer forever and then I also did not know when to check back – there was nothing in discussions for days and then suddenly a whole thread...”*

As positive features, students listed the organization of discussions (the fact that there was a discussion open for each topic), and that they had flexibility to contribute from home at their chosen time. They also appreciated the instructor answering their questions and explaining issues, but complained about the response time being too slow.

Two students mentioned misunderstandings, saying that their instructor was not able to help them to resolve the problem because they were not able to explain it well in an online discussion setting. They would prefer meeting in person to be able to “show” the problem.

Some students observed that, since in this particular course discussions mostly seemed to serve for just questions and answers with the instructor, there was not very much peer-to-peer communication to evaluate. However, there were in fact a few cases where students were helping each other online to resolve problems, before the instructor stepped in. They also appreciated their instructor for answering questions and directing them in their studies.

Interesting was a point one of the students made when referring to problems in peer communication:

*“I think we are just not used to express ourselves in discussions, to state our opinions. Maybe we are afraid of consequences...”*

### **Interview with a Student**

In February, 2011, I contacted all Comenius University students who submitted questionnaires, to inquire whether they would be willing to provide an interview. (They had sent their questionnaires directly to my email address, so I was able to contact them by that means.) Only one student responded positively and I conducted the interview on February 16, 2011. I described my research and we talked about questions from the original questionnaire, the partial results of my research, and his experience and opinions on discussions in online courses.

He claimed he understands how discussions could be a useful learning tool, but according to him, it has not happened that way in the courses he took at the Department.

*“We were using discussion forums to get teacher’s answers for problems. The only way it helped others was being able to read it and use only if they had the same problem.”*

He did not think that making discussions compulsory would really help. Students then might participate just for the sake of participating, and that would not be very useful. He thinks discussion needs interesting questions, good facilitation and clear rules for participation. On the other hand, he said it would not hurt if there were points towards assessment as rewards for active participation.

*“We students usually do not do things that are not connected with the assessment.”*

He said he did not have a problem to express himself or to socialize in a discussion forum and he did not think any of his classmates did.

The idea of a group of students working together in a discussion forum to search for answers without a teacher stepping in to provide those answers was very new to him:

*“Oh, now I understand what you mean. ... Yes, that would be nice. But you know, we were not doing anything like that in our course.”*

### **Summary and Comments on Comenius University**

Besides the centrally managed Moodle server, Comenius University does not have much of a strategy, training or support structure for teachers developing and teaching online courses.



Initial training is brief and mostly technical, and while technical support is provided, teachers use Moodle and experiment with online learning on their own initiative, with no incentive from the administration. As a result, there are only small numbers of teachers engaging the technology, usually no more than one or two per department. As well, there is little peer contact across different faculties and departments, leaving individual teachers to discover basic methods for online teaching by themselves, having no access to effective peer support.

Lack of strategy or incentives for teachers, with either poor or no training, and no access to peer support, are the most obvious barriers to online learning development that need to be addressed at Comenius. In fact, administrators are aware of the strategic and motivational shortcomings, and there are some ideas and efforts for improvement in these areas. Yet, while administrators are also aware that teacher training and support are not sufficient, they are not sure how to improve these.

Under these circumstances, most teachers use Moodle to support their face-to-face courses by sharing materials, and only a few of them actually experiment with discussion forums or other ways to involve students. In Robert's courses, discussion forums were mostly used for questions and answers, and I found only one thread in each semester showing students engaged in more meaningful discussion.

I believe that students would not have a problem to socialize online within the course, and the reasons for them to not become more involved probably were:

- Discussions being voluntary with no impact on assessment;
- The structure of questions... Robert was mostly just raising topics ("what is your experience with..."), as opposed to asking students to find solutions to problems, or draw conclusions;

- Choice of topics... it seems only a few topics were interesting enough for students to participate;
- Lack of facilitation on Robert's part... providing answers as opposed to encouraging students to find them

Most teachers at Comenius University do not have the training, motivation and energy to use discussions in a more collaborative way. Most of students lack experience with constructivist approach and collaboration and hence it does not occur to them, that discussions could be use differently.

## **4.4 Lower Social Presence and Teacher/Preacher Factor**

This section analyzes two issues of interest that arose from observations during the transcript analysis of the spring courses: the minimal social interaction among students in discussions, and the perception of teachers as the ones holding all the answers - as opposed to being more like facilitators (which Henrich noted as the difference between a teacher and a preacher).

### **Low Levels of Social Presence**

Transcript analysis results from the spring term provided indicators of social presence for the discussion threads (actually aggregate social presence – the number of indicators per 1000 words), to be slightly lower than the average found in the literature. Social presence indicators from the literature seem to be mostly in the range from 20 to 35 (Rourke et al, 1999; Rogers and Lea, 2005; Nippard and Murphy, 2007), whereas indicators from the Spring term were as low as 9.5 in Peter 1, 18.4 in Henrich 1 and 21.1 in Robert 1 course.

Social presence indicators for threads in the fall courses were, 14.3 in Peter 2, 22.4 in Robert 2, and 29.8 in Henrich 2. The thread analyzed in Henrich 2 is exceptional in a number of ways:

- This was a discussion in the last week of the course, when patterns of communication were well established and students felt comfortable with each other.
- The discussion question for this particular thread was formed in a different way than all other weekly questions
- Henrich's emphasis on facilitation
- Henrich's background and training. As opposed to both Peter and Robert, who had never taught outside of Slovakia, Henrich has extensive international experience. He went through extensive training on how to teach online and he has experience with online teaching in different settings with students from different countries and cultures.

So by removing the thread from Henrich 2, and its 29.8 indicator, the results are not significantly low, but still sit on the lower side of average, which suggests that social communication in Slovak courses tends to be slightly lower than average. Of course, while I cannot really draw such a conclusion from such a limited data set, I did work with it as a hypothesis during the interviews with teachers.

That the discussion thread with the better trained and experienced instructor and more experienced students stands out as the thread with higher social presence, is another reason to surmise that social presence indicators in the other discussion threads are lower due mostly to the inexperience and lack of training on the part the of teachers. Henrich's discussion thread is a good example of how teachers can formulate questions and facilitate discussion to reach higher levels of social interaction and critical thinking among students.

When I interviewed all three instructors in summer 2010, I provided them with the results of the discussion analyses from courses in spring. For both Peter and Robert, the idea that social interaction in online discussion is significant for cognitive interaction and critical thinking was new and intriguing. Henrich, by contrast, was familiar with and already a proponent of the concept.

It was also evident that in his fall course, Peter put more effort into social interaction in his discussions than his spring course - his aggregate social presence indicator increased from 22.1 in spring to 42.1 in fall. The same is true for Robert, whose social presence indicator also rose from 17.0 to 41.1.

However, this did not have much positive effect on students' social or cognitive presence in Robert's case, since discussion was generally unstructured and not facilitated. But in Peter's case, there is a notable increase in students' social presence from 9.5 in the spring course, to 14.3 in the fall - although the corresponding shift in critical thinking as cognitive presence is rather small (31.4% of messages fell into the Integration and Resolution categories in spring, increasing only to 34.4% in fall).

All three instructors rejected the idea during their interviews that this lower social presence can have any link to cultural tendencies. Just one student from Comenius University mentioned in his questionnaire that in the discussion he was

*"...afraid to express his opinions freely".*

Interestingly, when I conducted research on student perceptions of online courses in Slovakia in 2003, there was a significant difference between questionnaire and interview results in negative opinions expressed by students. The questionnaires showed ratings for instructors being heavily positive, where there was almost no negative feedback. When sitting for one-on-one interviews with the same students and promising

confidentiality, I learned that they indeed have significant negative impressions, but they would not feel confident to put it into written form, however anonymous and confidential the questionnaires were.

Although these graduate students were all of pre-school or lower age in 1989, when the political system in Slovakia changed, and none of them have personal memories of harassment over opinions expressed in written form, this kind of fear might still be culturally ingrained. However, the three students I interviewed all denied having this kind of problem. One of them said:

*“I might hesitate to express opinion on my teacher in evaluation questionnaire, but in discussion with opinion on course content? How can I get into trouble for opinion on that?”*

This shows that students do not have much trust in the rules of confidentiality and ethics in course evaluation. Perhaps this is not surprising, considering that the Slovak academic world has recently gone through a few scandals regarding plagiarism and poor ethics among university faculty (for instance, Hudak, 2008).

But with the issue of fear to express opinions in discussion being denied by both instructors and students in interviews, and that it came up in only one out of a total of 31 questionnaires, I believe it to currently have only an occasional and very minor role, if any at all, in influencing discussion participation of contemporary Slovak students.

I can conclude then, that the lower social presence observed in Slovak online courses is primarily a function of instructors' efforts, in areas such as organization of discussions, formulation of questions, and degree of facilitation; and with poor or no training, preparation or institutional support, Slovak instructors have difficulty in doing these effectively.

## Teacher/Preacher Factor

In his interview, Henrich complained of students expecting and demanding of him to provide answers to be memorized, when he instead was trying to facilitate discussion so that students would come to answers and conclusions themselves. He claimed he wants

*“...to be a teacher, not a preacher”.*

This tendency of students to request and expect answers to be given, rather than researched, repeatedly appeared in questionnaires from students in Henrich's courses. For instance:

*“I would really preferred to have the teacher involved our discussion some more. He was just encouraging us to talk, without him telling us if we are right”.*

A student in Robert's class appreciated his teacher coming in to tell him what was right and what was wrong:

*“I answered a classmate's question, giving him advice on a problem he had. I was very happy to see the teacher to come in afterwards and confirm that my advice was right.”*

Journalists Jarmila Horakova and Tomas Nejedly (Horakova, 2008; Nejedly 2008) conducted a series of interviews with university students and teachers who had experience from countries in Western Europe or North America. All these students and teachers seem to agree that an authoritarian approach to knowledge transfer is one of the main problems facing Slovak higher education. There are also other various articles where this is mentioned (Zabka and Mojzis, 2005; Mojzis, 2008). This suggests that having the teacher as an authority that holds all the answers is a norm in Slovakia, generally accepted by both teachers and students.

Looking at the teaching presence results from the courses I analyzed, the higher occurrence of Direct Instruction indicators, as opposed to Facilitation indicators, might suggest that the cultural inclination in Slovakia toward greater control and authority on the part of the teacher in a conventional classroom setting, could be a general occurrence in online learning as well.

Also in line with interviewees from the Nejedly and Horakova's articles (ibid), students called for more direct instruction from their teachers. Among the three instructors I interviewed, Henrich is the only one with extensive international experience and is also the only one openly troubled by student demands for more direct instruction, and so makes conscious attempts at a more facilitative approach. On the other hand, within preparation to teach online at universities abroad, Henrich went through extensive training which included the basics of instructional design, teaching online and discussion facilitation. So in his case the difference in approach is caused by combination of international exposure and training.

As is visible from the exceptional thread I analyzed in Henrich 2, indicated by the heightened social presence among students and high occurrence of indicators in cognitive presence, this approach can be successful in the Slovak environment.

## **4.5 Conclusion**

Data collected for my research, in addition to information gained from course monitoring and transcript analysis, in total consisted of 8 administrator interviews, 9 teacher interviews, 5 interviews with teachers and administrators from other institutions, 3 student interviews and 31 student questionnaires. This research suggested two directions for further analysis – lower social presence and the teacher/preacher factor.

A deeper analysis and drawing of further conclusions and recommendations is contained in the following chapter.



## **Chapter 5 Analysis, Conclusions and Implications for Practice**

In this chapter I examine answers to the original research questions and draw suggestions and conclusions. I then look for solutions from my findings to the most pressing challenges to online learning in Slovakia, and which are more broadly relevant to post-communist countries across Central and Eastern Europe.

The original research questions were as follows:

### **1. Perceptions of collaboration among Slovak students**

- How do students in the Slovak cultural context perceive and either embrace or reject online collaboration?
- What problems do students experience in an online interactive, collaborative setting, and what remedies to those problems are currently practiced?

### **2. Methods and strategies used by Slovak online course instructors**

- What methods are used to encourage and facilitate online collaboration and community building?
- What strategies are used by instructors to apply these methods?

Analysis of the results of the research should bring answers to following question:

- What needs of both instructors and students in the online setting are presently lacking support and what solutions may exist?

Section 5.1 focuses on the first question – perceptions of collaboration among Slovak students, section 5.2 deals with methods and strategies

which Slovak instructors and students use and prefer. Section 5.3 then analyzes the needs of both instructors and students.

## **5.1 Perceptions of Collaboration among Slovak Students**

I gathered information for this section from analysis of discussions in online courses, student questionnaires and interviews with students. As the questionnaire return rates were low and I was able to secure interviews with only a few students, this analysis is based on information gathered from a small sample of students and hence, does not have statistical weight.

Among students participating in the courses, only the more active and interested in online learning returned questionnaires and were willing to participate in interviews. As a result, this sample cannot be considered typical or representative of the online student community in Slovakia.

While there is no guarantee these conclusions might apply to the majority of Slovak online students, there is a reasonable chance that the problems faced by the more active and interested of these might be as common, and perhaps more pronounced, within the rest of the online student population.

### **How do Students in the Slovak Cultural Context Perceive and Either Embrace or Reject Collaboration?**

Most students in Slovakia have not been exposed to collaboration in their academic careers. There are very few teachers using collaborative methods or strategies that involve student input in their face-to-face teaching (Horakova, 2008; Nejedly, 2008). There are very few online courses offered within Slovak higher education, and even fewer of them encourage student-to-student communication and collaboration.

In interviews and questionnaires I conducted for graduate research with online students in Slovakia in 2003, I found a number of students with the impression that collaboration meant they would be copying the work of others and hence cheating (Pisutova, 2003). However, according to questionnaires collected within this research, most students seemed to have a strong grasp on the purpose of discussions – many of them noted the benefits of being able to look at issues from different angles and learn from classmates. A few also listed favorably, the opportunity to analyze the course content deeper and discover practical applications of the content. In addition students did not report experiencing shyness when communicating online or having any problem in expressing themselves through this technology.

**What problems do students experience in an interactive, collaborative setting, and what remedies to those problems are currently practiced?**

Issues mentioned in questionnaires and interviews with VSM students:

- Technical issues with the Learning Management System
- Lack of time to participate in discussions
- Low participation of instructor in discussions
- Plagiarism in discussion contributions

VSM is gradually switching to a new Learning Management System (LMS) with better thread organization for discussions. During his interview in summer 2010, Peter was convinced that for courses taught through this new system all student complaints about poorly organized discussions should disappear. However, the students I interviewed in February, 2011, claimed that the new LMS did not resolve the problems, with some feeling it made them worse. The new system was harder to learn and the organization of discussions was not user friendly. There is still, apparently, room for improvement in this area. For students with full time jobs and other

commitments, a lack of time for participation in online discussion is a common issue (Pettit, 2002; Tresman, 2002). At VSM discussion participation is compulsory and that forces students to find the time to participate.

Complaints of limited instructor participation in discussions came up in student comments at VSM time and again. Both Peter and Henrich admitted that some of that might be justified, as there were times during their courses when they should have responded faster, but they were too busy to do so. However, Henrich emphasized very strongly, referring to his international experience, that in a number of cases he withheld his opinion from discussions intentionally, wanting students to argue and defend their opinions. He is convinced that an opinion coming from him as the teacher would be taken as the final word on the issue, without any questions, and then there would be no further discussion and analysis.

Concerning the last point, plagiarism - VSM has been using Turnitin software for the last three years to detect plagiarism in submitted papers. They also apply strict punishments for students caught cheating. However, they have not so far been checking discussion contributions, but one of the points administrators noted during interviews was that they were considering Turnitin for online discussions.

Issues of concern mentioned by Comenius University students were:

- Technical issues with the Learning Management System
- Misunderstandings in discussions
- Lack of time to participate in discussions
- Dull topics of discussions
- Poor participation in discussions
- Fear to express opinion openly

Comenius University recently had all faculties switch from using their independent department Moodle installations, to one centralized system.

This new system was placed under the management of the university's Rectorate, with a team of technicians responsible for running and updating the system, as well as providing technical support to different faculties, departments and students.

Misunderstandings when communicating in written form and issues with lack of time are often mentioned in instructional design and course evaluation literature (for instance Harasim et al, 1995; Moore and Kearsley, 1996; Davis and Ralph, 2001). According to the literature, issues of misunderstandings and available time on the part of students can be remedied by providing a thorough course orientation (for students to be able to plan the time necessary for the course) and introduction to discussions (explaining what to expect, including what benefits the challenge of expressing one's ideas in written form could bring).

Dull discussion topics and poor participation are connected to the fact that, in his courses, Robert used discussions as a voluntary side-activity which was not a core part of the course assessment, and he handled them as such. He would provide answers to questions and step in to help resolve problems, but never focused on facilitating discussions to make them a learning tool.

The issue of being afraid to express one's opinion in an open discussion can have two dimensions. One suggests a shyness to express views in written form ('what if I am wrong and everybody will see it written there'). This is mentioned in number of evaluation studies (Bullen, 1998; McAlister, 1998; Davis and Ralph, 2001), and could be mitigated through assurances by the instructor that the course environment is a safe place where people are allowed to make mistakes, where there are no stupid questions, and so on. The second dimension is the fear of consequences. This fear might be considered a relic of a totalitarian heritage and could probably be overcome only with time and assurances that no consequences for negative feedback will result. However, this issue was mentioned by only one student in the

questionnaires, and all interviewed students at both VSM and Comenius University insisted that fear is not a problem for them or their classmates.

A number of Slovak higher education institutions provide a Learning Management System (usually Moodle) for their teachers and students, as well as technical support. This is true for both Comenius University and VSM. In the case of technical problems, students at either institution can contact somebody for technical support during working hours via email or phone.

At Comenius University, all non-technical support for students is left to the instructor with no institutional guidance or rules to govern online instructional activity. As a result, most instructors use the LMS as only a supplemental resource for their face-to-face courses. With those few who create and teach courses online, the support they provide to students varies according to what the individual instructor considers appropriate and necessary.

At VSM, at the beginning of the school year, students go through a day long face-to-face introduction to the LMS and online learning in general. Instructors are given a sheet with guidelines for teaching online that also includes rather detailed rules for communication and support of students.

There is still plenty of leeway, however, for personal preferences concerning communication with students and feedback. As a result, the courses at VSM vary in the cognitive and social levels of discussions, as well as in teaching presence, depending on instructor's personal beliefs and approach.

## **5.2 Methods and Strategies Used and Preferred by Slovak Course Instructors and Students**

I gathered information for this section from the literature, as well as from attending online learning conferences in Slovakia, researching websites of higher education institutions, interviews with teachers and administrators from VSM and Comenius University, as well as from other institutions, and discussions in the online courses I monitored. These are again mostly qualitative data from only a small number of institutions and cannot be considered representative for all online learning in Slovakia.

### **What Methods are Used to Encourage and Facilitate Online Collaboration and Community Building?**

Most online courses taught in Slovakia do not seem to encourage and facilitate collaboration at all. When asking people I met at a national Slovak elearning conference in November, 2009, about collaboration in their online courses, in most cases I would either meet a blank stare from a lack of understanding (What do you mean by collaboration? What is it good for? Why do it in online courses? etc.), or I would meet with understanding and frustration (Yes, collaboration in our online courses would be nice and useful, but there is no money/motivation/time/energy to do it).

VSM and Comenius University are among a very few institutions in Slovakia where efforts in the area of online learning can be found. There is an inter-university teacher training education project that uses discussions collaboratively and I came across two other institutions with a few teachers experimenting with it independently. There may also be a few other institutions involved in online learning in Slovakia that I am not aware of.

However, all the online courses that I know of which are trying to implement some online collaborative activities primarily use asynchronous

discussions. At VSM, institutional policies literally prohibit instructors to use synchronous methods in order to give students as much time flexibility as possible. Comenius and other institutions usually include in their courses a few face-to-face meetings which cover for synchronous elements of their courses, and so asynchronous discussions seem to be the preferred method of choice for them as well.

### **What Strategies are used by Instructors to apply these Methods?**

VSM has very clear policies on what instructors should do when engaged in online learning activity. Hence, all VSM courses have weekly asynchronous discussions with instructors putting forward questions or topics and facilitating the process. However, it is an instructor's personal choice how to formulate questions and how to handle facilitation.

Instructors at VSM receive a three-day initial training on how to create and teach their online courses in summer, prior to the beginning of the school year. According to what some of the instructors told me, this training is more focused on how to manage the Learning Management System than on facilitation of the collaborative process. They scramble to learn these skills as they go and get most support and tips from questions and interaction with their peers. The VSM administrators admit that online course design, teaching and facilitation training would be very useful for these teachers, but their budget is too tight right now and they cannot afford it.

Henrich's last weekly thread from the Henrich 2 course is an excellent example of how discussion in the Slovak setting can work successfully, with sufficient social communication and critical thinking present. The recipe for success in this case seems to be:

- good preparation – explaining to students beforehand what is expected, and how they should participate
- effective formulation of discussion questions



- greater emphasis on facilitation than direct instruction

Robert at Comenius University sets voluntary weekly discussions while posing questions or not, and without putting effort into the analytical side of the discussions. His students are relaxed and interact socially even though they will not think critically or analyze issues without guidance and facilitation. According to information I received from Robert and his students who took other online courses with different instructors at the university, it seems that the few instructors who use discussions work in this way.

Students do not have a very wide and varied experience with online courses and those they have experienced so far use discussions exclusively. Hence, when I asked interviewed students for their preferred methods of collaboration in their online courses, they immediately said discussions. However, when I asked whether they can imagine having, for instance, blogs, wikis or chats included in their course, they showed enthusiasm towards having those options.

Forum discussion as a method for online student collaboration dominates Slovak online learning and appears to be preferred among instructors and students. However, if instructors had more training and incentives, this might begin to change, and students seem to be ready and willing to accept and embrace new methods and strategies offered to them by instructors.

### **5.3 Needs of Instructors and Students**

This section looks into answers to the last research question: Which needs of both instructors and students are presently lacking support?

According to Bates (2000, 2008), there are four levels of support required for online learning to work effectively (student support was explained in detail in Chapter 2, here I provide only a brief summary):

- Technology infrastructure support – support necessary to maintain networks, equipment and the learning management system
- Educational media support – to help to create educational materials
- Instructional design support – for curriculum design, faculty development, project management and program evaluation
- Subject experts – professors, instructors and teachers that provide content and teach courses

Many experts agree that instructional support needs to be more comprehensive than just simple computer literacy training, as is the case in Slovakia (for instance Palloff and Pratt, 2001, 2005; Bates, 2007; Wilson, 2007); there needs to be a system of training for all the necessary skills for teaching online, along with a system of financial incentives and support for implementing new technologies. Bates and Sangra (2011) reviewed online learning strategies and implementation on 11 different higher education institutions (6 in Europe and 5 in North America). In their recommendations for success they also emphasize integrated training and faculty preparation connected with allocation of resources and financial motivation.

### **Needs of Instructors and Students at Comenius University**

Comenius University, along with a number of other public universities in Slovakia, provides teachers with technical training and support only. Creating, teaching and maintaining courses are fully dependent on the personal initiative of instructors. This bottom-up approach of online course development is natural in initial or trial stages. However, Comenius University appears to have been in this initial stage for over a decade now.

Tony Bates (2000) calls it the Lone Ranger approach. He says that although this approach provides space for experimentation, as well as for teachers and students to gain necessary skills, and supports a wide range of different initiatives, these small individual projects can very often fail due to an amateur approach to various aspects of the project, as well as a lack of planning for project sustainability, and a lack of time for professors to bring their projects to completion.

This seems to be happening repeatedly at Comenius University, and elsewhere around Slovakia. Small projects start up with great enthusiasm and then fail when the volume of work becomes apparent, and when no additional pay or recognition is forthcoming. Robert and some of his colleagues were experimenting with discussions and collaboration in order to get data for their dissertation research. Robert finished his dissertation in late 2009 and admits he is not sure how much time and energy he will be able to put into using discussions and collaboration in the future.

Concerning Bates' four levels of support, Comenius University has subject experts to provide content and teach courses and it provides technology infrastructure support. However, teachers are completely lacking support at the other two support levels. They get no support with educational media, in order to be able to create original instructional materials, and they lack instructional design support. Due to poor educational media support, online courses do not make full use of the variety of tools and methods available for engaging students, even those offered within their LMS. The lack of instructional design support could be partially to blame for so many teachers thinking that copying a textbook online might work as an online course. Teachers do not know how to plan and design collaborative activities.

Improvements are necessary specifically in three areas:

- Motivation and incentives to develop and teach online courses.  
There are very few grant opportunities from outside the university,

and the university does not seem to provide any financial or non-financial incentives for teachers to take on additional work.

According to interviewed administrators, the funds that are available within Comenius University for grants and incentives for innovation have thus far not been geared toward online learning.

- Training and support. Teachers get training and support in how to use the technology and the Learning Management System. However, there is no training or support in how to apply the technology to planning and creating online courses or how to teach them. Trainings should cover instructional design and availability and use of different media and technologies.
- Peer support. Teachers that experiment with online courses at Comenius University are spread out over different faculties and departments and usually unaware of what their peers are doing. Establishing a system or network of peer communication and support through the centralized Moodle system, and occasional face-to-face meetings, would be desirable.

Students get technical training and support through the unit that maintains the LMS, and they get access to the library as well as feedback and general support from their instructor. For course information, registration, tuition payments and other administrative issues, students taking online courses are treated the same as students in face-to-face courses. They need to contact administrative personnel via email, phone or a visit to the office for different tasks the same as all other students at the university.

Instructor support varies according to the instructor's individual views and preferences. There is no institutional policy on how to support online students. Students make heavy use of peer support, and although they might occasionally complain about slow feedback, they generally do not recognize a problem with the support they receive. For most students this is their first and only online course and they lack a frame of reference for what kind of online feedback and support might otherwise be available from their teachers and institution.

In order to improve student support, in my opinion, Comenius University should:

- Create guidelines for student feedback and support
- Include student feedback and support into the training provided for online teachers

### **Needs of Instructors and Students at VSM**

VSM applies a top-down approach to online course development and teaching. It is compulsory for teachers at VSM to offer online courses and teachers know this when they apply for the job. Teachers receive three day technical training and technical support. They have detailed institutional rules for course design and student feedback and support.

However, VSM does not provide its teachers with sufficient training and support in course design and online instruction in fact peer support is relied on. Similar to Comenius University, VSM is lacking in levels of education media support and instructional design support. Useful improvements could be:

- Training for instructors in methodology, instructional design and teaching. Instructors could use more knowledge on how to plan their courses, how to create discussion questions, and how to facilitate discussions. They could also be encouraged to implement other methods of asynchronous collaboration, such as wikis or blogs, etc.
- VSM teachers have effective peer support to rely on while planning and teaching their courses, but continuous instructional design support would be very useful.

Students at VSM get technical training and support, as well as support and feedback from their instructors. Regarding administrative support, online students at VSM are also treated the same as students taking face-to-face courses. However, as opposed to the situation at Comenius, where small numbers of students take online courses, VSM has more than half of its total number of students enrolled in online coursework. As such, VSM administrators are more used to working out registration, tuition and other issues with students using phone, email or postal services, and are more ready and capable of working with students at a distance.

Besides occasional complaints about delays in feedback from their instructors, VSM students do not seem to feel any need for improvement in their support. VSM's online teaching guidelines for teachers include policies on feedback and support for students. Similar to Comenius University, VSM still could improve training for their teachers in how to facilitate discussions and provide feedback effectively.

Following parts of this chapter summarize research results and draws implications for practice and recommendations.

## 5.4 Conclusions

To summarize my research results, I found:

- Collaboration as a teaching method is rarely used in Slovakia, especially in the online setting
- Students do not expect to be asked to participate in discussions, but when asked they do not seem to have a problem to embrace the method. I believe that they would be able to readily embrace other methods and strategies if offered to them
- Instructors at these Slovak institutions lack motivation and training to promote and use collaborative methods in their online courses
- The few who make the effort at online collaboration use mostly asynchronous discussions. These discussions are generally perceived as the first step in getting students involved during their online course, but due to lack of motivation and training, a shift to other methods and strategies might not happen very soon.

These findings imply the need for significant changes at all levels, including but not limited to those made by instructors in order to improve their teaching, and at the level of institutional organization (which could also be applicable to more institutions within Slovakia, as is explained in section 6.5), as well as at the level of Slovak national policies, as shown in section 6.6

### Connection to previous research

As part of my masters-level research, I explored student experiences from some of the very first online courses given in Slovakia, which were taught in 2001 and 2002 (Pisutova, 2003). The purpose of the study was to

investigate the problems encountered by learners during their first experience with online learning, to analyze the cause of these problems and attempt to discern which are connected with Slovak culture, history, legislation and economic circumstances, and hence, which might be specific to Slovakia, or Central and Eastern Europe on the whole. Research was conducted on four different online courses from three different universities.

Eight typical categories of problems were observed (weak infrastructure, lack of access to technology, lack of motivation and skills, teaching style and approach, label of low quality for distance education, independence and responsibility problems, newness of peer collaboration, language problems with Internet content), three of which might be argued as being uniquely characteristic of the countries of Central and Eastern Europe:

- Issues of teaching approach and style
- Problems of independence and responsibility on the part of students
- Newness of peer collaboration

The research presented in this thesis the findings:

#### *Issues of teaching approach and style*

Slovak teachers tend to transfer their courses online bringing their usual approach and style of lectures and conduct exams at the end of the term, in their face-to-face courses, they tend to use a invite students to face-to-face exams at the end of the term. Just as there are a relatively few teachers who apply engaging and collaborative activities in their face-to-face teaching, there are very few that do so in online courses as well. Even when using discussions for critical analysis, instructors tend to emphasize direct instruction as opposed to facilitation. There are two things that can help increase the percentage of teachers using engaging and collaborative activities in online coursework: training (in instructional design) and exposure (via increased international mobility).



### *Problems of independence and responsibility on the part of students*

In questionnaires and interviews, student requests for teachers to offer precise directions for what to do and to always provide the correct answers to questions, appeared repeatedly. Using Henrich's term, I call this a 'teacher/preacher' phenomenon. This seems to be the result of students being used to an authoritarian teacher, who has and provides all the answers, right or wrong. However, from interviews with instructors, as well as with students, I concluded that when students are exposed to different approaches and prompted or required to think for themselves and come up with resolutions as they were in Henrich 2, they can adjust rather fast and engage this mode of learning without much problem.

### *Newness of Peer Collaboration*

Unfortunately, there are many teachers and students in Slovakia who are not clear on the basic concept of collaboration. One student from Comenius University that I interviewed admitted he did not know what I was talking about when referring to collaboration, and asked me to explain the concept. Such concepts can become better known and more widely used, by improved training and exposure (mobility).

It also seems that the conclusions from my small evaluation research (Pisutova and Malovicova, 2009) mentioned in section 1.4, are valid on a wider scale:

- If teachers do not understand and respect the values of collaborative methods, it is unlikely that they will apply them successfully so that students participate and gain valuable experience. Most teachers in Slovakia might not even be aware that teaching methods other than the authoritarian style exist. Teachers like Peter and Robert are aware, and willing to try, but without proper training they are learning only very slowly through their own experimentation the basics of teaching online that they could be more easily and efficiently taught in a formal setting.

- It is important to work with students' expectations. Students (particularly students in an environment with a rich authoritarian tradition like Slovakia), need to know beforehand why and how collaborative activities are important and are going to be used, and what to expect from them.
- Students having no experience with collaboration need to be provided with a proper introduction and orientation to it. Instructors cannot expect students to participate effectively, enthusiastically and voluntarily in something that is brand new and unfamiliar to them. Assignments consisting of discussions should be made obligatory in this environment, even if course participants are older adults.

## **5.5 Implications for Practice – Course and Institutional Level**

This section summarizes recommendations based on my research for instructors and institutions that were subjects of my case studies. I believe though, that the institutional recommendations have wider applicability within Slovak context. In general, I found that improvements could be made at each of the course, institution, and state levels.

### **Improvements at the Course Level**

Instructors at VSM could better formulate questions in order to guide students in a more analytical direction and put more emphasis on a facilitative approach, as opposed to direct instruction. They could add explanations into the course orientation about expectations of students expressing opinions, and that disagreement with the instructor is not just acceptable, it might be occasionally required.

Instructors at Comenius University could put greater effort into planning, managing and facilitating discussions. In order to get increased participation, discussions should be made compulsory and part of the assessment. However, it is unrealistic to expect, in the absence of compensation or incentives that an instructor like Robert will keep putting in additional work year after year.

### **Improvements at the Institutional Level**

It is difficult to generalize knowledge from only two case studies. However, based on an interview with an administrator and a teacher at the University of Zilina, and discussions with teachers and administrators from other Slovak higher education institutions during the conference in 2009, I concluded that there are a few issues in the organization of online learning that apply to a wider number of institutions in Slovakia:

- Online courses being developed in the Lone Ranger (Bates, 2000) approach
- Teachers being provided with access to learning management system and technical support, but without incentive, training or instructional design support
- Institutions putting no additional effort into support for online students. Online students get administrative support the same way as face-to-face students, plus support from their instructor depending on his personal preferences.

Based on this, there are general suggestions for small improvements that can be made at these institutions. These small improvements require some funding, which is hard to come by at Slovak higher education institutions. However, in most cases this is a matter of priorities. Institutions are able to fund technical support, according to Comenius University administrators,

and there are a series of internal grant programs for young teachers or specific fields of teaching or research, and if online learning becomes a priority some of these existing funds could be redirected.

Improvements should address the following issues:

- Motivation and incentive for teachers – developing and teaching online courses takes a lot of work, and even a highly enthusiastic teacher cannot be expected to put up additional hours year after year, without any type of reward. Teachers should be compensated for work in creating and teaching online courses. This could be achieved by offering additional funds, or by relieving them from some of their other duties at the university to free up the time they will need.
- Training for teachers - aside from training in using technology and the Learning Management System, teachers should be offered training in online course design and online teaching
- Continuous support for teachers – teachers should be able to get their design and teaching questions answered as they go, and also be provided with help in evaluating and improving their own courses.

However, in order to ensure long term success in developing and providing online courses, each of these institutions should switch to a more top down organization model of online learning. This could be either like the *Boutique Approach* described by Hartman and Truman-Davis (2001), which suggests creating a support unit where a teacher who wants to develop an online course can get one-on-one support from an instructional designer and/or technology support person. According to the authors, this model is effective for smaller institutions where the number of teachers requesting help is not very large.

For larger institutions, Bates (2000, 2004), recommends a *Project Management Approach* that involves a team working on design and delivery of the project. Each team member contributes different skills while the process as a whole is managed by a team leader or a project manager. The project can be an online course, a whole study program, a small module of a course, or a CD-ROM or website.

Changing the support and organizational structure within a university requires funding that would be hard to find within the budget a Slovak institution at this time, even if online learning becomes more of a priority. However, in order to ensure long-term success the changes should be planned and implemented, and creative funding schemes developed.

## 5.6 Improvements on National Level

All of the general problems of Slovak higher education (funding structure, internal loss of human capital, poor quality assurance, low international mobility, perceptions of low quality of part-time study programs, and the prevailing authoritarian teaching approach) reflect negatively on online courses.

Slovak education policy documents often include statements about emphasizing new methods of teaching with technology or e-learning (for instance, the Strategy for Informatization of Slovak Society, 2007, Long Term Goals of the Ministry of Education, 2010), but these have not been translated into any actions.

The Slovak government needs to address some of the more pressing problems of higher education. Among the problems as described in Chapter 1 (financial and staff concerns, general perceptions of teachers in society, quality assurance and international mobility), I found the most significant to be funding structures and low international mobility.

The current funding structure for Slovak higher education does not encourage institutions to develop new forms of course delivery. Most public Slovak universities receive more applications for full time day study than there is capacity. Since most of their funding is based strictly on the number of students, without differentiation in the mode of study, it is easier to accept as many full time students as possible instead of putting effort into developing courses for part time students.

In April, 2011, the Slovak Parliament approved the Higher Education Act amendment that allows public universities to charge tuition for part time study, and to keep those funds within the university budget (Aktuality,

2011). This would help to motivate universities to develop better and more attractive part time programs, including online courses. However, a group of opposition members in parliament have brought the tuition issue in front of the constitutional court, claiming tuition payments hamper the constitutional right to education, and it might take some time before it will be clear whether and when this amendment will come into effect.

The issue of international mobility seems to be of key importance in order to help with authoritarian traditions in education, since it seems that both students and teachers with international experience are those who are pushing for a shift away from the authoritarian teaching and learning approach.

Since Slovakia entered the European Union, opportunities for international mobility within the EU for Slovak teachers and students, has increased with opportunities to participate in EU funded exchange programs. However, most exchange programs require financial participation by Slovak universities, and with the poor financial situation for many institutions in Slovakia, international mobility is not a priority. Other problems (Laszlo, 2008), are the fact that Slovak study programs are not yet fully compatible with other countries, according to the Bologna process, and as Slovak universities are not well known abroad the interest of foreign students to study in Slovakia is low.

Besides student mobility, which might sometimes be connected with loss of human capital (Boshier and Pisutova 2002; Pisut, 2008), teacher mobility can have even stronger positive effect. Teacher exchange programs are usually for shorter periods of time, which is less expensive, and have immediate influence on the teaching process. However, lack of funding, limited degree compatibility, and the fact that Slovak universities are not known outside the country and hence less attractive for foreigners, hamper teacher mobility too.

There are other activities and initiatives that a government could do to promote online learning development in the country, such as developing a national e-university, creating a national repository of e-learning materials, or help promote and develop the private e-learning sector (Bates, 2001).

The Slovak government, however, still keeps a strong focus and priority on economic transformation, with concerns in education being addressed with only the most pressing issues, or by simply validating the status quo. An example of this could be the situation with tuition payments for part time study that have been introduced only years after universities had already been collecting them through private companies, as is described in Chapter 4. Hence, even though I think Slovakia would benefit from a more proactive approach to online learning development from its government, in practicality, I do not think online learning might become part of the agenda in the near term.

## **5.7 Recommendations for Future Research**

As in many research studies, the conclusions of this research lead to further questions that would require more research. For instance:

- What changes and improvements in funding structure of Slovak higher education would really prove effective?
- What measures can Slovak government take to increase international student and teacher mobility?
- How to increase mobility and limit potential of Brain Drain?
- How to make Slovak universities more known and more interesting for foreign students and teachers?

There are very few research studies published in Slovakia, or other countries of Central and Eastern Europe (which share the authoritarian heritage with Slovakia), that focus on collaboration or teaching methods



and students perceptions. It would be interesting to find more studies in these areas for comparison.

As it seems that training for teachers is what Slovak institutions lack most, the next logical step would be to provide some suggestions for components of teacher training and support in Slovak conditions. Also, deeper analysis and recommendations for Slovak government to create a more pro-active strategy would be desirable.

## **5.8 Limitations of This Study**

Only a few higher education institutions in Slovakia provide online courses for their students and only a limited number of teachers at these institutions use online collaboration as a teaching tool. This suggests that the institutions I was able to use as my case studies have administrators supporting online learning more than at most institutions in Slovakia. It also suggests that the teachers I interviewed are more innovative than average Slovak teachers.

It is possible, that among students participating in the courses, only those more active and interested in online learning returned questionnaires and were willing to participate in interviews.

As a result, my sample of institutions, administrators, teachers and students cannot be considered typical or representative of higher education community in Slovakia.

While there is no guarantee that my conclusions might apply to the majority of Slovak universities and their online students, there is a

reasonable chance that the problems faced by the more active and interested of these might be as common, and perhaps more pronounced, within the rest of the online learning population.

This study examined an under-researched context of online learning and particularly where the impact of recent teaching traditions specific to these societies is poorly understood. Even though my data are not sufficient to generalize, this research helps to shed light on issues of concern with collaborative learning in online learning which are, perhaps characteristic of the region and indicate directions for further research.

## **5.9 Implications for My Work**

In October 2007, when I first applied for the EdD program and created my research proposal, I was still working part time for the Open Society Foundation in Bratislava and I was planning to apply knowledge gained through my research to help design more effective online courses for Slovak higher education institutions. I believed that designing online courses promoting collaboration in Slovakia and Central and Eastern Europe was very important, and the attention of researchers, teachers and management of Slovak universities towards these issues was minimal.

However, due to my family situation, I moved in 2008 to upstate New York and spent some time working as an instructional designer for Empire State College (ESC) in Saratoga Springs, NY. Even though living across the ocean made collecting data and conducting interviews a bit inconvenient, I believe that it also made me independent on Slovak institutions and contacts and helped me achieve better level of objectivity while conducting my research.

As my family situation changed again I am planning to move back to Slovakia in summer 2012. I was offered a position as e-learning director at Comenius University starting in September 2012. I received an invaluable opportunity to apply results of this research in my new position.

## 5.10 Final Note

Collaboration in online courses in Slovakia, similar to face-to-face courses, is rare. Authoritarian teaching traditions still dominate all forms of delivery. The few teachers and institutions who experiment with online collaboration mostly use asynchronous forums in weekly discussions, and the choice of methods and strategies seem to be heavily influenced by a lack of exposure to other options.

However, students exposed to collaboration seem to embrace it readily and teachers with better training are capable of facilitating discussions successfully, getting students engaged and achieving social interaction and critical thinking.

The gradual implementation of more student oriented and collaborative teaching approaches can and will happen in Slovakia, just as it has in other western societies. It will happen in face-to-face teaching as well as in the online form, and its success in the latter will be a function of focusing on incentives, training and support.

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## Appendix 1 - Questionnaire

Question 4 was added to the questionnaire only for the second round of course monitoring in fall semester 2010.

### Collaboration in online courses in Slovakia

#### Questionnaire

##### 1. Satisfaction

On the scale 1 to 5 mark how much useful you consider online discussions in this course for your learning. Mark 1 means you consider it excellent and very useful, mark 5 means not useful at all.

You choose mark: \_\_\_\_

Why did you choose this mark?

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##### 2. Impression

What was positive about discussions in this course? \_\_\_\_\_

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Why? \_\_\_\_\_

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What was negative about discussions in this course? \_\_\_\_\_

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Why? \_\_\_\_\_

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### 3. Problems

What problems did you experience with discussions and collaboration with your peers? \_\_\_\_\_

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How do you think these problems could be avoided? \_\_\_\_\_

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### 4. Peer-to-peer communication in online discussions

What is your impression on communication with your peers in online discussions (content communication and social communication)? \_\_\_\_\_

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How did your teacher influence your communication with peers? \_\_\_\_\_

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